

DRAFT FINAL ENGINEERING EVALUATION/COST ANALYSIS

**Avery Landing Site
Avery, Idaho
TDD: 08-05-0006**



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Table of Contents

Executive Summary	xiii
1 Introduction	1-1
2 Site Characterization	2-1
2.1 Site Description and Background.....	2-1
2.1.1 Site Location	2-1
2.1.2 Type of Facility and Operational Status.....	2-1
2.1.3 Structures and Topography	2-2
2.1.4 Geology and Soil Information.....	2-3
2.1.5 Hydrogeology.....	2-3
2.1.6 Surrounding Land Use and Populations.....	2-4
2.1.7 Sensitive Species and Environments.....	2-4
2.1.8 Meteorology	2-5
2.2 Regulatory History and Previous Investigations.....	2-5
2.2.1 IDEQ Investigations, Late 1980s	2-5
2.2.2 EPA Site Inspection, 1992	2-6
2.2.3 Potlatch Product Recovery System, 1994	2-6
2.2.4 Potlatch Product Containment Barrier, 2000	2-6
2.2.5 Potlatch LNAPL Discharge Maintenance, 2005 to Present	2-6
2.2.6 EPA Removal Assessment, 2007	2-7
2.2.7 Draft Potlatch EE/CA, 2009 to 2010.....	2-7
2.2.8 Cultural Resources Evaluation and Biological Assessment.....	2-8
2.3 Previous Removal Actions	2-8
2.4 Source, Nature, and Extent of Contamination.....	2-9
2.4.1 Location of Contaminants	2-9
2.4.2 Quantity of Contaminated Area	2-10
2.4.3 Targets Potentially Affected by the Site.....	2-10
2.5 Analytical Data.....	2-10
2.6 Streamlined Risk Evaluation.....	2-11
2.6.1 Conceptual Site Model.....	2-11
2.6.2 Streamlined Human Health Evaluation.....	2-13
2.6.2.1 Receptors and Exposure Routes.....	2-13
2.6.2.2 Screening Values	2-14
2.6.2.3 Screening Evaluation Results	2-15
2.6.2.4 Uncertainties	2-16
2.6.2.5 Conclusions of the Human Health Risk Evaluation	2-17
2.6.3 Streamlined Ecological Risk Evaluation.....	2-17
2.6.3.1 Site Ecological Characteristics	2-17
2.6.3.2 Ecological Receptors	2-18
2.6.3.3 Preliminary CSM	2-18
2.6.3.4 Assessment Endpoints and Measures	2-18
2.6.3.5 Data Sources	2-19
2.6.3.6 Surface Water Screening Results.....	2-19
2.6.3.7 Sediment Screening Results.....	2-20

Table of Contents (cont.)

Section	Page
2.6.3.8	Uncertainties 2-20
2.6.3.9	Conclusions of Ecological Risk Evaluation..... 2-21
2.6.4	Contaminants of Concern..... 2-21
3	Identification of Removal Action Objectives 3-1
3.1	Statutory Considerations on Removal Actions 3-1
3.2	Determination of Removal Scope and Objectives 3-1
3.2.1	Removal Action Scope..... 3-1
3.2.2	Removal Action Objectives 3-1
3.3	Applicable or Relevant and Appropriate Requirements..... 3-2
3.4	Determination of Removal Schedule 3-3
4	Identification of Removal Action Alternatives 4-1
4.1	Common Components of Alternatives..... 4-1
4.1.1	Excavation and LNAPL Removal..... 4-1
4.1.2	Existing Treatment/Recovery System and Debris Removal 4-2
4.1.3	Bank Reconstruction 4-3
4.1.4	Stabilization of Disturbed Areas 4-3
4.1.5	Best Management Practices 4-3
4.1.6	Institutional Controls..... 4-4
4.1.7	Post-Removal Action Monitoring..... 4-4
4.2	Identification of Removal Action Alternatives 4-4
4.2.1	Alternative A1: No Action 4-4
4.2.2	Alternative A2: LNAPL Extraction and Ex Situ Thermal Desorption of Soils..... 4-4
4.2.3	Alternative A3: LNAPL Extraction and Ex Situ Soil Washing 4-5
4.2.4	Alternative A4: LNAPL Extraction and Off-Site Disposal 4-6
5	Individual Analysis of Removal Action Alternatives..... 5-1
5.1	Alternative A1: No Action 5-2
5.2	Alternative A2: LNAPL Extraction and Ex Situ Thermal Desorption of Soils..... 5-3
5.3	Alternative A3: LNAPL Extraction and Ex Situ Soil Washing 5-4
5.4	Alternative A4: LNAPL Extraction and Off-Site Disposal 5-5
6	Comparative Analysis of Removal Action Alternatives..... 6-1
6.1	Effectiveness 6-1
6.1.1	Overall Protection of Human Health..... 6-1
6.1.2	Compliance with ARARs/TBC Materials..... 6-1
6.1.3	Long-Term Effectiveness and Permanence..... 6-2
6.1.4	Reduction of Toxicity, Mobility, or Volume 6-2
6.1.5	Short-Term Effectiveness..... 6-2
6.2	Implementability 6-3
6.2.1	Technical Feasibility 6-3
6.2.2	Administrative Feasibility 6-3
6.2.3	Availability of Service and Materials..... 6-3

Table of Contents (cont.)

Section	Page
6.2.4 State and Community Acceptance	6-4
6.3 Cost.....	6-4
6.3.2 Cost Evaluation	6-4
6.4 Summary of Comparative Analysis	6-4
7 Recommended Removal Action Alternative.....	7-1
8 References	8-1
Groundwater Monitoring Data, 2007 EPA Removal Assessment and 2009 Potlatch Field Investigation	A-1
Borehole Logs from 2007 EPA Removal Assessment and 2009 Potlatch Field Investigation.....	B-1
Analytical Data Summary Tables, 2007 EPA Removal Assessment	C-1
Analytical Data Summary Tables, 2009 Potlatch Field Investigation, and START Data Validation Memoranda.....	D-1
Avery Landing Site ARARs	E-1
Soil Washing Treatability Study, ART Engineering 2009	F-1
Data and Assumptions for Cost Estimates	G-1

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List of Tables

Table 2-1	Summary of TPH/LNAPL Observations in Boreholes and Test Pits (2007 and 2009)	2-22
Table 2-2	Summary of LNAPL Observations in Monitoring Wells (2007 and 2009).....	2-24
Table 2-3	Summary of Samples, EPA 2007 Removal Assessment	2-25
Table 2-4	Summary of Samples, Potlatch 2009 Field Investigation.....	2-26
Table 2-5	Human Health Evaluation Soil Screening Results.....	2-28
Table 2-6	Comparison of Maximum Site Metals Concentrations to Background.....	2-30
Table 2-7	Human Health Evaluation Groundwater Screening Results.....	2-31
Table 2-8	Human Health Evaluation Surface Water and Aquatic Organisms Screening Results.....	2-33
Table 2-9	Ecological Evaluation Surface Water Screening Results	2-34
Table 2-10	Ecological Evaluation Sediment Screening Results	2-35
Table 2-11	Screening Summary for All Media.....	2-37
Table 4-1	Removal Action Alternatives.....	4-8
Table 4-2	Common Components of Alternatives.....	4-9
Table 5-1	Removal Action Cost Analysis for Alternative A2, LNAPL Extraction and Ex Situ Thermal Desorption of Soils	5-7
Table 5-2	Removal Action Cost Analysis for Alternative A3, LNAPL Extraction and Ex Situ Soil Washing	5-8
Table 5-3	Removal Action Cost Analysis, Alternative A4, LNAPL Extraction and Off-Site Disposal	5-9
Table 6-1	Summary of Effectiveness Comparison.....	6-5
Table 6-2	Summary of Implementability Comparison.....	6-6
Table 6-3	Summary of Comparative Analysis.....	6-7

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List of Figures

Figure 2-1	Site Location Map.....	2-39
Figure 2-2	Site Vicinity Map.....	2-40
Figure 2-3	Site Layout Map.....	2-41
Figure 2-4	Historic Railroad Facility Layout	2-43
Figure 2-5	Historic Railroad Facility Layout with Recent Aerial Image of Site.....	2-45
Figure 2-6	Groundwater Elevations and Contours, September 1, 2009	2-47
Figure 2-7	Groundwater Elevations and Contours, November 19, 2009	2-49
Figure 2-8	Estimated Free Product Plume in 2000 and Historic Maximum Product Thicknesses	2-51
Figure 2-9	LNAPL Plume Area Estimates (2000, 2007, and 2009) and Product Observations in Soil Borings and Test Pits (2007 and 2009)	2-53
Figure 2-10	LNAPL Plume Area Estimates (2000, 2007, and 2009) and LNAPL Observations in Monitoring Wells (2009)	2-55
Figure 2-11	Cross Section A-A' of LNAPL Plume Area	2-57
Figure 2-12	Cross Section B-B' of LNAPL Plume Area.....	2-59
Figure 2-13	Cross Section C-C' of LNAPL Plume Area.....	2-61
Figure 2-14	Sample Locations from 2007 EPA Removal Assessment	2-63
Figure 2-15	Test Pit Locations from 2009 Potlatch Field Work	2-65
Figure 2-16	Monitoring Well and Soil Borehole Sample Locations from 2009 Potlatch Field Work	2-67
Figure 2-17	Sediment and Surface Water Station Locations from 2009 Potlatch Field Work	2-69
Figure 2-18	Conceptual Site Model for Human and Ecological Streamlined Risk Evaluation	2-71
Figure 4-1	Excavation and Backfill of Contaminated Soil, Stages 1–4	4-11
Figure 4-2	Process Flow Diagram for Full-Scale Soil Washing	4-13

Figure 4-3	Process Schematic for Full-Scale Low-Temperature Thermal Desorption	4-14
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List of Abbreviations

Abbreviation	Definition
%	percent
°F	degrees Fahrenheit
AAR	Applied Archaeological Research, Inc.
ASAOC	Administrative Settlement Agreement and Order on Consent
ARAR	applicable or relevant and appropriate requirements
ART	ART Engineering, LLC
AST	above-ground storage tank
bgs	below ground surface
BMP	best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMC	CMC Real Estate Company
COCs	contaminants of concern
CRE	Cultural Resources Evaluation
CSM	conceptual site model
CWA	Clean Water Act
DRO	diesel-range organics
E & E	Ecology and Environment, Inc.
EE/CA	Engineering Evaluation/Cost Analysis
EPA	United States Environmental Protection Agency
FHWA	Federal Highway Administration
FoE	frequency of exceedance
ft/day	feet per day
Golder	Golder Associates, Inc.
IC	institutional control
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Department of Environmental Quality

IDTL	Initial Default Target Levels
IDW	investigation-derived waste
LNAPL	light non-aqueous phase liquid
LTTD	low-temperature thermal desorption
µg/L	micrograms per liter
MCLs	Maximum Contaminant Levels
mg/kg	milligrams per kilogram
Milwaukee Railroad	Chicago, Milwaukee, St. Paul and Pacific Railroad
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NESHAP	National Emission Standard for Hazardous Air Pollutants
OSHA	Occupational Safety and Health Administration
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
Potlatch	Potlatch Corporation
PVC	polyvinyl chloride
RAOs	removal action objectives
RSL	Regional Screening Levels
START	Superfund Technical Assessment and Response Team
SVOCs	semivolatile organic compounds
TAT	Technical Assistance Team
TBC	to be considered
TDD	Technical Direction Document
TPH	total petroleum hydrocarbons
UECA	Uniform Environmental Covenants Act
URS	URS Consultants, Inc.
USGS	United States Geological Survey
VOC	volatile organic compounds

Executive Summary

The Avery Landing Site (Site) is a former railroad roundhouse and maintenance facility for the Chicago, Milwaukee, St. Paul, and Pacific Railroad (Milwaukee Railroad) located in Avery, Idaho. Railroad operations at the Site ceased in the 1970s, and most of the railroad facilities and structures were subsequently demolished. Portions of the former railroad facility Site are currently owned by Potlatch Corporation (Potlatch), Larry Bentcik, and the Federal Highway Administration (FHWA). Shoshone County holds an easement interest in a portion of the Site. Potlatch currently owns the largest portion of the Site, and have used this property for log storage and for temporary housing of employees.

Soil, groundwater, surface water, and sediment at the Avery Landing Site contain petroleum hydrocarbons and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances that appear to be associated with the Site's historical use as a railroad roundhouse and maintenance facility. Petroleum hydrocarbons (diesel and heavy oil) and other hazardous substances are present in subsurface soil and groundwater and are discharging into the St. Joe River, which is adjacent to the Site. Petroleum discharges to surface waters and shorelines of the United States contravene the requirements of the Clean Water Act. Petroleum as light non-aqueous phase liquid (LNAPL) present in groundwater and surface water also contravenes Idaho State water quality standards.

Investigations and cleanup actions have been performed by Potlatch at the Site since the late 1980s pursuant to agreements with the Idaho Department of Environmental Quality (IDEQ). Potlatch has installed two different treatment/containment systems at the Site to address the petroleum hydrocarbons that are present in the groundwater and discharging to the St. Joe River. In the early 1990s, Potlatch installed a groundwater recovery system in which contaminated groundwater was pumped from extraction wells to an oil/water separator. Recovered product was stored for later off-Site disposal, and the recovered groundwater was re-injected upgradient of the Site. By 2000, only 1,290 gallons of product had been recovered, and discharges to the St. Joe River were still occurring. Because the groundwater pump and treatment system was not effective in preventing discharges to the St. Joe River, in 2000 Potlatch removed this system and installed a vertical impermeable membrane along the bank of the St. Joe River to try to prevent the petroleum from discharging into the River. Behind the impermeable membrane, a recovery trench and extraction wells were installed for passive oil recovery. The membrane failed to be effective as discharges to the St. Joe River were still observed after the containment barrier was installed.

In 2007, the Potlatch Corporation entered into an Administrative Settlement Agreement and Order on Consent (ASAOC) with EPA to perform an Engineering Evaluation/Cost Analysis (EE/CA) for the Site. Field work associated with the EE/CA was completed by Golder Associates, Inc., (Golder) of Redmond, Washington, in 2009, and Potlatch submitted a draft EE/CA report (Golder 2010a) and Cultural Resources Evaluation (CRE) report (Golder 2010b) to EPA in January 2010. Following a careful and thorough review of the EE/CA and CRE draft reports prepared and submitted by Potlatch, it was determined that the deficiencies in these drafts could best be corrected by having EPA produce the final reports.

Human health and ecological streamlined risk evaluations were performed for the EE/CA using analytical data collected during the 2007 EPA removal assessment and the 2009 field work performed by Potlatch. The results of the human health streamlined risk evaluation indicated that soil, groundwater, and surface water are impacted by Site-related contamination. Numerous analytes in Site media exceed health-based screening criteria, indicating that adverse health effects due to exposure to Site-related contamination are possible. In particular, carcinogenic polycyclic aromatic hydrocarbons (PAHs) exceed screening criteria for all media. The results of the ecological risk evaluation indicated that surface water and sediment samples from the St. Joe River near the Avery Landing Site are being impacted by petroleum contamination. In particular, diesel- and oil-range organics were frequently detected in sediment and occasionally in surface water. In addition, selected PAHs in sediment and surface water exceeded risk-based concentrations.

The scope of the proposed removal action is the reduction of petroleum product and hazardous substances to acceptable human health and ecological risk-based concentrations at the Site. The removal action objectives (RAOs) developed for the Site include removing the current non-functioning groundwater containment and extraction system; removing the bank and associated petroleum contamination; reconstruction of the bank; removal, treatment, and/or management of LNAPL and associated hazardous substances in the subsurface of the Site; and proper off-Site disposal of any waste streams generated during the removal action.

To achieve the RAOs, the EE/CA identified removal action alternatives, including excavation of the contaminated soil, followed by either low-temperature thermal desorption (LTTD), soil washing, or off-Site disposal of the contaminated materials. The removal action alternatives were analyzed individually and compared relative to one another to identify the advantages and disadvantages of each alternative relative to preventing discharges to surface waters and shorelines of the United States and to overall protection of public health and the environment. Estimated full scale costs are \$10.54 million for LTTD, \$7.89 million for soil washing, and \$8.5 million for off-Site disposal.

The recommended alternative for the removal action is Alternative A4, LNAPL extraction followed by excavation and off-Site disposal. This alternative was found to be effective and implementable. The key advantages of Alternative A4 are that it is the most straightforward and least likely problematic alternative. Although Alternative A4 is not the least expensive to implement, the additional costs would be offset in part by avoiding potential cost increases due to administrative and technical feasibility concerns associated with the other alternatives such as bench and pilot scale treatability investigations and design requirements. Additionally, Alternative A4 is likely the most adaptable to evolving Site-specific conditions that would emerge during cleanup activities.

1 Introduction

The United States Environmental Protection Agency (EPA) has tasked Ecology and Environment, Inc., (E & E) to prepare this Engineering Evaluation/Cost Analysis (EE/CA) for the Avery Landing Site in Avery, Idaho (Site). This EE/CA provides a vehicle for public involvement and evaluates and recommends the appropriate response for the Site. E & E performed the work under Superfund Technical Assessment and Response Team (START)-3 contract EP-S7-06-02, Technical Direction Document (TDD) 08-05-0006.

Soil, groundwater, surface water, and sediment at the Avery Landing Site contain petroleum hydrocarbons and hazardous substances that appear to be associated with the Site's historical use as a railroad roundhouse and maintenance facility for the Chicago, Milwaukee, St. Paul, and Pacific Railroad (Milwaukee Railroad). Petroleum hydrocarbons (diesel and heavy oil) and other hazardous substances are present in subsurface soil and groundwater and are discharging into the St. Joe River, which is adjacent to the Site.

Several owners have been identified for the Site, including Potlatch Corporation (Potlatch), Larry Bencik, and the Federal Highway Administration (FHWA). Shoshone County holds an easement interest in a portion of the Site. In 2007, Potlatch entered into an Administrative Settlement Agreement and Order on Consent (ASAOC) with EPA to perform an EE/CA at the Site. Field work associated with the EE/CA was completed in 2009 by Golder Associates, Inc., (Golder) of Redmond, Washington, and Potlatch submitted a draft EE/CA report (Golder 2010a) and Cultural Resources Evaluation (CRE; Golder 2010b) to EPA in January 2010.

Following a careful and thorough review of the EE/CA and CRE draft reports prepared and submitted by Potlatch, it was determined that the deficiencies in these drafts could best be corrected by having EPA produce the final reports. START prepared this EE/CA based on existing Site information and data; no additional field investigation work was performed. This EE/CA was conducted in accordance with the criteria established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as well as sections of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) applicable to removal actions (40 Code of Federal Regulations [CFR] Section 300.415). Section 300.415(b)(4)(i) of the NCP requires that an EE/CA be completed for all non-time-critical removal actions. This EE/CA identifies the objectives of the removal action and analyzes the advantages and disadvantages of each alternative relative to preventing discharges to surface waters and shorelines of the United States and to overall protection of public health and the environment. This EE/CA also provides information about the nature and extent of contamination and potential risks posed by the contaminants to human and ecological receptors. The EPA document *Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA* (EPA 1993) was used in the preparation of this EE/CA.

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2 Site Characterization

2.1 Site Description and Background

2.1.1 Site Location

The Avery Landing Site is located in the St. Joe River Valley in the Bitterroot Mountains in northern Idaho, 1 mile west of the town of Avery in Shoshone County (Figures 2-1, 2-2, and 2-3). The Site is directly adjacent to the St. Joe River to the south and Highway 50 to the north, and is at 47°14' 57" north latitude and 115° 49' 16" west longitude (Google Earth 2010). The Site is located within the northeast quarter of Section 16, Township 45 North, Range 5 East, and the northwest corner of Section 15, Township 45 North, Range 5 East.

2.1.2 Type of Facility and Operational Status

The Site was used as a switching and maintenance facility for the Milwaukee Railroad from 1907 until 1977. The facility included a turntable, roundhouse, machine shop, fan house, engine house, boiler house, storehouses, coal dock, oil tanks, a pump house, and other aboveground structures. Activities included refueling locomotives, using solvents to clean engine parts, cleaning locomotives, and maintaining equipment. The facility was located at the end of an electric rail line from the east; at the Avery facility, trains switched to fuel oil and/or diesel locomotives. Fuel oil was stored on Site in a 500,000-gallon above-ground storage tank (AST). The Milwaukee Railroad began to operate electric locomotives in the mid-1910s and continued until the mid-1970s, and transformer oil was reportedly stored at the Avery Landing Site (URS 1993). During field investigations in 2007 and 2009, trace concentrations of PCBs were detected in subsurface soils, groundwater, and LNAPL (E & E 2007, Golder 2009).

Figure 2-4 illustrates a historical railroad facility diagram, and Figure 2-5 presents this diagram superimposed on a recent aerial photograph of the Site. The locations of relevant features are indicated and include the turntable, machine shop, cinder pit, boiler house, oil and coal bins, 50,000-gallon diesel and fuel oil AST (indicated as the "50' oil service tank" on Figures 2-4 and 2-5), other oil tanks, and associated piping.

The Milwaukee Railroad filed bankruptcy and then reorganized under the name CMC Real Estate Company (CMC). Under CMC, the properties were sold and otherwise divested (TAT n.d.). Potlatch leased portions of the Site from the Milwaukee Railroad from 1973 to 1980. Potlatch then acquired the western portion (Section 16) of the Site in 1980 (Golder 2010a), although there are reports that Potlatch attempted to purchase the entire Site (including the eastern portion currently owned by Mr. Bencik). Many of the former Milwaukee Railroad facilities, including the turntable, roundhouse, engine house, machine shop, and cinder pit, were located on the portion of the property obtained by Potlatch. After Potlatch acquired the land, Potlatch leveled and graded the property and then used it for temporary log storage. Portions of the property have also been leased to tenants for log storage, parking, and trailer sites (Golder 2010a). The buildings and equipment associated with the former railroad maintenance facility were presumably demolished at some point after Milwaukee Railroad ceased operations, but it is not clear who performed the demolition, when it was performed, or how the demolition debris was disposed.

The eastern portion (Section 15) of the Site reverted back to the family of the previous owner (before Milwaukee Railroad began operations), and this family sold the property to David Thierault. In 1996, Mr. Thierault sold the property to Mr. Larry Benteik, who currently owns the property (Benteik 2007). Historical railroad facilities on the eastern portion of the Site included an office, store house, oil pipes, and sand, coal, and oil storage.

The original railroad grade along the northern edge of the Site was acquired by the Federal Highway Administration for use in the construction and expansion of State Highway 50 (URS 1993). A portion of the Site extends to the shoulder north of the highway, where the former railroad roundhouse AST was located, and where Potlatch re-injected untreated groundwater from the 1990s pump-and-treat system after processing through the oil/water separator.

The maintenance facility at the Avery Landing Site was related to several other Milwaukee Railroad facilities approximately 0.75 miles east in the town of Avery. In the town itself was a passenger terminal and Substation No. 14, an electric substation that provided electricity for the electric rail line to the east.

2.1.3 Structures and Topography

South of the highway, the Site is composed of two properties (Figure 2-3). The eastern portion (Section 15) is owned by Larry Benteik, who maintains a vacation cottage and mule corral on the property. The western portion (Section 16) is owned by Potlatch. Until recently, there were several houses, motor homes, and motor home utility hook-ups. Several residents lived on the property year-round, and several more resided on the property seasonally. A domestic well was located on the Potlatch property for residential use. In 2009, Potlatch removed and/or demolished the residences and disconnected the trailer sites from the domestic well. The domestic well is reportedly disconnected and not in use (Golder 2010a), but it apparently has not been abandoned in accordance with state regulations.

Numerous groundwater monitoring wells and "stick-up pipes" (polyvinyl chloride [PVC] pipes installed vertically in subsurface soil) are located on Site. The stick-up pipes were used to monitor for the presence of light non-aqueous phase liquid (LNAPL) on groundwater during previous investigations. There are also several larger wells that had been used for the product recovery system installed for Potlatch. In the center of the Site there is an approximately 5,000-gallon AST and a shed on the concrete slab. The AST was used by Potlatch to store recovered product from the product recovery system operated from 1994–2000. The shed is used to store absorbent booms used by Potlatch to control the product discharges to the St. Joe River. Near the shed, drums of investigation-derived waste (IDW) from EPA's 2007 removal assessment are staged. Additionally, there are existing (and possibly historical) utilities, including above-ground and below-ground power lines, pipelines, and sewer lines.

There is little remaining at the Site to indicate its previous use as a railroad roundhouse and maintenance facility, with the exception of a concrete slab and the remnants of rail lines leading to the former roundhouse. Presently, the Site is on relatively flat ground with gravel and a small amount of vegetative growth. The Site was largely composed of fill material as a result of construction of the railroad facility, and Potlatch performed additional leveling and grading after purchasing the property (URS 1993).

The elevation of the Site is approximately 2,465 feet above mean sea level (Google Earth 2010). The Site is on a flat, filled bank at a bend in the St. Joe River (Figures 2-2 and 2-3). The river valley is narrow and remote, and the immediate area around the Site is largely rural, with some areas of residential and commercial use. Just across the highway to the north are steep mountain slopes.

2.1.4 Geology and Soil Information

The Site is located within the Northern Rocky Mountain province along the south slope of the Bitterroot Mountains in the St. Joe River valley. The subsurface geology and geology of the surrounding hills is dominated by Precambrian (middle Proterozoic) sedimentary deposits including carbonates and quartzite which are part of the Piegan Group, also known as the Middle Belt Carbonate, Apple Creek Formation (Winston 2007). These deposits were part of an intracratonic basin that was periodically connected to the ocean system, and lacustrine and oceanic deposits can be found throughout the group (Ross and Villeneuve 2003, Link et al. 2007). The depth to bedrock at the Site is unknown.

The Site was developed along an active portion of the St. Joe River by in-filling from the steep canyon walls, which is evident from the coarse-grained angular gravels that are apparent in the upper 10-12 feet of fill across the Site. The Site has historically undergone extensive grading to make it a suitable location for a railroad facility. As such, the Site is immediately underlain by unconsolidated sand and gravel fill materials existing from ground surface to about 12 feet below grade. At various Site locations, debris including concrete, wood waste, scrap metal, asphaltic material, and pipes of various material and dimensions were encountered in test pit excavations. Approximately 700 feet of the river bank adjacent to the Site was excavated and backfilled with fill soils and riprap rock placed on the riverside surface for armor to minimize bank erosion. Below the unconsolidated fill material are rounded gravels deposited by the St. Joe River in a high energy environment.

2.1.5 Hydrogeology

The St. Joe River flows to the west along the Site's southern boundary eventually discharging to Coeur d'Alene Lake, 60 miles to the west. Based on data collected at the Calder gauging station (located approximately 23 miles downstream from the Site), during spring snow melt in May, the average river flow ranges from 7,000 and 8,000 cubic feet per second (cfs). In contrast, average river flows in September range from 400 and 500 cfs. Sudden storms, especially heavy rain or snow, can cause extreme river flows and flooding during warm periods in winter and spring. River flows have been measured as high as 30,000 to 50,000 cfs at Calder, Idaho. St. Joe River levels can fluctuate more than 8 feet in stage height at the Calder Station (USGS, National River Data Base, 2008).

Historically, groundwater elevations have typically ranged from approximately 10 to 16 feet below ground surface (bgs; Hart Crowser 2000a). Potlatch measured groundwater levels in September and November 2009 from existing Site monitoring wells (including the wells that EPA installed in 2007) and four new monitoring wells that Potlatch installed in September 2009. In September 2009, depths to groundwater in the monitoring wells ranged from 8.6 to 18 feet bgs. In November 2009, depths to groundwater ranged from 8.8 to 16 feet bgs. Groundwater

contour maps for September and November 2009 are included as Figures 2-6 and 2-7, respectively (Golder 2010a). Groundwater level measurement summary tables from the 2007 and 2009 investigations are included in Appendix A.

The groundwater on the Bencik portion of the Site may be influenced by the river, such that river water may discharge into the Bencik property. This is demonstrated by the April 2007 groundwater level measured in MW-5 (89.87 ft), which was higher than the groundwater level measured in EMW-02 (89.3 ft) and lower than EMW-01 (89.93 ft; E & E 2007). Based on a triangulation of equipotentials among those three 2007 measurements, it appears that river water is moving into the groundwater.

Short-term hydraulic slug tests were performed by Potlatch in 2009 to approximate the hydraulic conductivity of the aquifer beneath the Site (Golder 2010a; slug test results are included in Appendix A). Ultimately, the results of the slug test were to be used to evaluate the need and implementability for a long-term pump test. Slug tests were performed on seven monitoring wells during the period of September 8 through September 10, 2009. Overall, the total range in hydraulic conductivities was 0.31 to 5.16 feet per day (ft/day); however, the h/h_0 versus time graph for HC-1R, with the highest hydraulic conductivity, has a noticeable dip at approximately t_{50} , indicating that the analysis may not be as accurate. Without considering HC-1R, hydraulic conductivity values range from 0.31 ft/day to 3.59 ft/day. Spatially, the highest hydraulic conductivities occurred in monitoring wells GA-2, GA-3, and GA-4 located at the western end of the Site, with the highest hydraulic conductivity measured at GA-2 (3.59 ft/day). The wells located on the eastern end of the property had lower hydraulic conductivities ranging from 0.31 ft/day (EMW-01) to 1.74 ft/day (EMW-02).

2.1.6 Surrounding Land Use and Populations

The Site is within the narrow St. Joe River Valley, which is in the St. Joe National Forest District of the Idaho Panhandle National Forests. There are generally steep mountains to the north and south of the St Joe River, including directly north of Highway 50 from the Site. Land uses in the area around the Site are largely rural and recreational, which is consistent with its location surrounded by a national forest. The St. Joe River is a popular recreational waterway that is often used for kayaking, rafting, and fishing. There are several areas of commercial land nearby, including a motel and recreational vehicle park across the river.

2.1.7 Sensitive Species and Environments

The St. Joe River is used for wildlife habitat, recreation, and drinking water for downstream residents. According to the Idaho Administrative Procedures Act (IDAPA) 58.01.02.110.11, the segment of the St. Joe River adjacent to the Avery Landing Site that could be impacted by contaminants found at the Site has the following designations: special resource water, domestic water supply, primary contact recreation, cold water communities, and salmonid spawning (E & E 2007).

The draft Potlatch EE/CA describes the sensitive species in the area as follows:

Historically, native game fish in the river include westslope cutthroat trout (*Oncorhynchus clarki lewisi*), bull trout (*Salvelinus confluentus*), and mountain whitefish

(*Prosopium williamsoni*; Idaho Department of Fish and Game). This section of the St. Joe River has been designated as a catch-and-release fishing area for cutthroat trout. Other species of fish found in the river include bull trout, rainbow trout (*O. mykiss*) and Dolly Varden (*S. malma*).

The Site is located within Region 1, Hunting Unit 6 (Idaho Department of Fish and Game). In this management unit, the Department issues hunting permits for the following big game: Deer, Elk, Bear, Moose, and Wolves. In addition to big game, smaller game such as rabbits and furbearers are hunted as well as a wide variety of birds (water fowl and upland birds). (Golder 2010a)

2.1.8 Meteorology

This climate summary was prepared from data recoded at the nearby Avery Ranger Station Number 2 from 1968 through 2009. Avery has an average annual high temperature of 56.0 degrees Fahrenheit (°F) and an average low temperature of 35.2 °F. The warmest months are July and August, when average high temperatures are 83.1 and 83.8 °F, respectively, and average low temperatures are 49.4 and 49.2 °F, respectively. The coldest month is January, with an average high temperature of 30.3 °F and an average low temperature of 20.7 °F (WRCC 2010b).

The average annual precipitation from 1968 through 2009 was 37.31 inches. December and January receive the highest precipitation, with averages of 5.02 and 5.89 inches, respectively. July and August are the driest months with average precipitation amounts of 1.25 and 1.21 inches, respectively. Avery receives an annual of 75.6 inches of snowfall each year, with most falling in December and January (20.0 and 29.5 inches, respectively). Snowfall has been recorded from October through April (WRCC 2010b).

Average annual wind speed in the region (at the Coeur d'Alene airport) from 1996 to 2006 is 7.3 miles per hour (mph), with a range of 6.6 mph in August to 8.3 mph in March (WRCC 2010a).

2.2 Regulatory History and Previous Investigations

The earliest reported observation of petroleum discharges to the St. Joe River from the Avery Landing Site were documented in a letter from the Idaho Department of Health to Milwaukee Railroad in 1970. The letter reports Forest Service District Ranger observations that "at times oil coming from the Milwaukee Railroad roundhouse covers as much as one-third of the river surface in the vicinity of the spill" (Van't Hul 1970).

2.2.1 IDEQ Investigations, Late 1980s

In the late 1980s, the State of Idaho Division of Environmental Quality of the Idaho Department of Health (now IDEQ) began to investigate the Site because of the presence of visible petroleum product discharges to the St. Joe River from the Site riverbank. The investigation included installation of several monitoring wells and test pits in the late 1980s and early 1990s. These investigations determined that free product was a mixture of diesel and heavy oil and was present at the water table throughout the Site, with product thicknesses exceeding four feet in some locations.

2.2.2 EPA Site Inspection, 1992

In 1992, URS Consultants, Inc., (URS) performed a site investigation at the Site as a contractor to EPA. URS collected soil, groundwater, and surface water samples from the Site and vicinity for laboratory analysis. The results indicated the presence of contaminants, including volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, and PCBs. Benzene, arsenic, and lead were detected in an on-Site monitoring well at concentrations that exceeded the federal Maximum Contaminant Levels (MCLs; URS 1993).

2.2.3 Potlatch Product Recovery System, 1994

In 1994, Potlatch installed a product recovery system at the Site, pursuant to an IDEQ Consent Order. The system included several trenches installed near the bank of the St. Joe River. Groundwater and product were pumped from these trenches and then sent through an oil/water separator. Recovered product was stored in an on-Site AST for later off-Site disposal. Recovered groundwater was pumped underneath Highway 50 and re-injected into the ground through an approximately 360-foot long re-infiltration trench installed north of the road. It is not known whether re-injection of the recovered groundwater north of the road impacted the extent and distribution of contaminants at the Site. The system operated until approximately 2000 and recovered a total of 1,290 gallons of product (Farallon 2006). Although this system is no longer in operation, the AST used to store recovered product remains on Site.

2.2.4 Potlatch Product Containment Barrier, 2000

By 2000, despite the operation of the product recovery system, product discharges from the Site were still observed on the banks of the St. Joe River. Under direction from IDEQ, Potlatch installed a restraining barrier along the bank in 2000 to help prevent free product from reaching the river. Potlatch excavated material away from the bank, installed a PVC liner to act as a barrier wall to prevent product discharges to the river, and backfilled with sand, gravel, and riprap along the bank. Potlatch also installed a series of product recovery trenches and wells to recover any free product that might collect against the barrier (Farallon 2006). With the new restraining barrier, Potlatch proposed to recover additional free product if product was present in Site recovery wells at a thickness of 0.05 feet (0.6 inches) or greater. Potlatch continued to monitor the monitoring wells on Site for free product, but the company never operated the product recovery system again (Cundy 2007).

2.2.5 Potlatch LNAPL Discharge Maintenance, 2005 to Present

Beginning in 2005, IDEQ continued to observe product discharges to the St. Joe River originating from the Site. IDEQ recommended that Potlatch place booms in the river to contain the discharges (Golder 2010a). Although the booms were supposed to be deployed and maintained consistently while any discharges were present, actual boom deployment was intermittent and incomplete. On multiple occasions beginning in 2005, IDEQ and EPA observed LNAPL discharges to the river with no booms in place. Additionally, EPA has observed oil "blooms" rising from the river bed several feet away from the river bank. Furthermore, Potlatch's use of the booms was not subject to a comprehensive containment and LNAPL recovery plan or a schedule agreed upon with any agency.

2.2.6 EPA Removal Assessment, 2007

In a letter dated September 11, 2006, IDEQ requested the assistance of EPA to investigate the Site and the continued petroleum discharges into the St. Joe River (IDEQ 2006). In 2007, EPA performed a removal assessment at the Site to investigate the discharges of petroleum to surface waters and shorelines of the United States in contravention of the Clean Water Act (CWA) and potential releases of CERCLA hazardous substances and other environmental impacts related to the Site's past use as a railroad roundhouse, maintenance, and refueling facility. EPA installed 13 soil borings, of which six were completed as monitoring wells. The investigation focused on the eastern area of the Site, including portions of both the Potlatch and Bentcik properties.

EPA observed petroleum hydrocarbons in surface water, groundwater, and subsurface soil throughout the Site at levels that exceeded applicable state regulatory standards. Petroleum was observed floating on groundwater in monitoring and recovery wells with measurable product thicknesses up to 0.88 feet. Subsurface soils collected from soil borings were saturated with petroleum. EPA observed active petroleum discharges and "blooms" to the St. Joe River in contravention of the CWA and state regulations. An approximately 200-foot stretch of the Site's river bank contained evidence of past petroleum discharge activity, including oil staining on rip rap at the water level and oiled vegetation. Analytical results confirmed the presence of diesel and heavy oil (bunker C), which was consistent with historical documentation about the nature of the petroleum releases. EPA's investigation also indicated the area of the free product plume was larger than previously estimated.

Subsurface soil and groundwater samples collected from the Site contained several CERCLA hazardous substances (including carcinogenic polycyclic aromatic hydrocarbons [PAHs]) that exceeded applicable state and federal guidelines. Several metals (arsenic, iron, lead, manganese, and mercury) also exceeded applicable guidelines, but some of these metals may be naturally elevated in the region. The PCB Aroclor-1260 was detected in several Site soil samples and in a sample of the petroleum product, and Aroclor-1260 exceeded the state guideline in one groundwater sample. The on-Site domestic well, which is downgradient of the Site's LNAPL plume area, contained concentrations of Site contaminants, including anthracene, diesel-range organics (DRO), and arsenic.

In addition to the visible petroleum product discharges to the St. Joe River, a sample of surface water contained four PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and chrysene) at concentrations that exceeded Idaho Risk Evaluation Manual guidelines, and the PAH benzo[a]pyrene also exceeded the federal ambient water quality criteria. When compared to sediment guidelines, PAH compounds detected in the soil samples exceeded several consensus-based sediment quality guidelines (E & E 2007).

2.2.7 Draft Potlatch EE/CA, 2009 to 2010

In 2008, Potlatch entered into an ASAOC (CERCLA Docket No. 10-2008-0135) with EPA to complete an EE/CA, a Biological Assessment (BA) and a CRE for the Avery Landing Site. Work associated with the EE/CA was completed by Golder as a consultant to Potlatch. As a part of the EE/CA, Potlatch agreed to perform additional characterization field work at the Site. The scope of work for the additional field work was outlined in a work plan dated January 21, 2009 (Golder 2009).

The field work for the EE/CA was completed in the late summer and fall of 2009 and included the following tasks:

- Collection of subsurface soil samples from five boreholes that were installed at the northeastern portion of the Site, near the former AST location and Highway 50;
- Excavation of six test pits from the LNAPL plume area for collection of contaminated Site soils for soil wash treatability testing;
- Excavation of eight test pits, with the collection of associated subsurface soil samples, to characterize the western half of the Site;
- Installation of four additional monitoring wells at the Site, followed by water elevation gauging, free product observations, and groundwater sampling; and
- Collection of sediment and surface water samples from eight locations along the banks of the St. Joe River adjacent to the Site.

The field work included the sampling of subsurface soil (from test pits and boreholes), groundwater (from existing and four newly installed monitoring wells), LNAPL (from groundwater wells and surface water discharges), sediment, and surface water. LNAPL was observed in subsurface soil, groundwater, sediment, and surface water. Analytical results indicated that DRO/heavy oils, SVOCs (including carcinogenic PAHs), PCBs, VOCs, and metals were detected in subsurface soil and sediment. DRO/heavy oils and carcinogenic PAHs were detected in groundwater. Surface water contained carcinogenic and non-carcinogenic PAHs and metals.

Based on observations recorded during field work, Potlatch updated the estimated extent of the LNAPL plume. Potlatch also observed evidence of buried debris and trash in the western half of the Site.

A component of the Potlatch EE/CA investigation was a treatability study to evaluate soil washing as a potential treatment method for petroleum-contaminated soil. The results of the treatability study indicated that soil washing could effectively achieve removal efficiencies of 96 to 97 percent (%) for DRO and heavy-oil range hydrocarbons (ART 2009).

2.2.8 Cultural Resources Evaluation and Biological Assessment

Golder performed a Cultural Resources Evaluation (CRE) of the Site for Potlatch (Golder 2010b). Applied Archaeological Research, Inc. (AAR), a START-subcontracted archaeology and cultural resources firm, reviewed the Potlatch CRE report and found it to be deficient (AAR 2010b). EPA subsequently completed a CRE of the Site (AAR 2010a). EPA's review of the Potlatch CRE and EPA's own CRE report are available as separate documents.

A biological assessment of the impacts of the planned removal action will be performed once a removal alternative is selected.

2.3 Previous Removal Actions

There have been no previous removal actions conducted under the authority of CERCLA or the CWA at the Site.

2.4 Source, Nature, and Extent of Contamination

2.4.1 Location of Contaminants

A petroleum plume of heavy oil and diesel is present in subsurface soil and groundwater and is migrating toward, and discharging to, the St. Joe River. In addition to this petroleum-based LNAPL plume, organic contaminants (e.g., PAHs, VOCs, and PCBs) and metals are present in subsurface soil and groundwater at the Site. The oil and diesel were likely released during historical Site activities as a railroad roundhouse, maintenance, and fueling facility. Many of the contaminants are also likely related to the LNAPL plume (especially the PAHs), and other contaminants are likely related to other historical Site activities.

The aerial extent of the LNAPL plume area has been monitored and estimated during previous investigations and cleanup activities performed on behalf of Potlatch. Figure 2-8 presents a summary of the estimated LNAPL plume area in 2000 (Hart Crowser 2000b). Figure 2-8 also includes the maximum LNAPL levels recorded in each Site monitoring well and piezometer as compiled for the 2007 EPA removal assessment (E & E 2007).

The investigations performed by EPA in 2007 (E & E 2007) and Potlatch in 2009 (Golder 2010a) included sampling of subsurface soil, and geologists recorded observations of any petroleum product observed in subsurface soil samples. Table 2-1 presents a summary of the observations of petroleum in subsurface soil from soil boreholes and test pits in 2007 and 2009. Copies of borehole logs from these investigations are included in Appendix B. This data is presented on Figure 2-9, which also presents the estimates of the extent of the LNAPL plume from 2000 (Hart Crowser 2000b), 2007 (EPA; E & E 2007), and 2009 (Potlatch; Golder 2010a). In addition to the main LNAPL plume area, petroleum was also observed in subsurface soil from three discrete locations to the west, including test pits TP-03 and TP-06 and the borehole for monitoring well GA-3.

Table 2-2 presents a summary of LNAPL observations recorded in monitoring wells during the 2007 EPA (E & E 2007) and 2009 Potlatch (Golder 2010a) investigations. The data was obtained from groundwater monitoring data obtained from each report (Appendix A). LNAPL was observed in several of monitoring wells in the estimated petroleum plume area. In several of the wells, the specific thickness of the monitoring wells could not be determined. In 2007, the thickness of LNAPL was observed as high as 0.88 feet in monitoring well HC-4. In 2009, LNAPL was observed as high as 3.73 feet in MW-11, although it is not clear how representative this measurement is because no water was detected at the bottom of the well. Monitoring well locations where free product was observed in 2009 are indicated on Figure 2-10.

This LNAPL plume area (Figures 2-9 and 2-10) extends from the former AST area in the northeast (north of Highway 50) to the south and west towards the St. Joe River. Major portions of the LNAPL plume area are on both the Bencik (Section 15) and Potlatch (Section 16) properties. The southern boundary of the LNAPL plume area is contiguous with the bank of the St. Joe River. In addition to the contiguous petroleum plume area, smaller discrete areas of petroleum contamination were observed downgradient (i.e., to the west) of the plume area at TP-03, TP-06, and GA-3.

In addition to the LNAPL, a number of individual chemical compounds, including carcinogenic PAHs, PCBs, VOCs, and metals, have been detected at the Site. Many of these detections are associated with the LNAPL plume area, although some of the compounds are also present in the western portion of the Site, including test pits TP-02, TP-04, and TP-06.

2.4.2 Quantity of Contaminated Area

The LNAPL plume area and the discrete locations to the west (TP-03, TP-06, and GA-3) have an estimated area of approximately 5 acres. LNAPL-contaminated soil is encountered at depths ranging from 3 to 16 feet bgs, and the contaminated soil extends as deep as 17 to 20 bgs. Cross sections and a three-dimensional image were developed using AutoCAD software. The cross sections are presented on Figures 2-11, 2-12, and 2-13. Using this information, the volume of the LNAPL plume area and the three discrete locations were calculated to be approximately 43,000 cubic yards. To yield a conservative estimate, a factor of 10% was added, increasing the volume to approximately 47,000 cubic yards.

2.4.3 Targets Potentially Affected by the Site

Potential targets for contaminants at the Site include current or potential future residents or visitors to the Site. Currently, a seasonal cabin is located on the Bencik property (Section 15 area). The Potlatch portion of the Site (Section 16) has been used previously for seasonal and year-round residences and could be used again for residential purposes in the future. A domestic well was installed downgradient of the LNAPL plume area and was used to supply drinking water to residences on the Potlatch property. Although Potlatch reportedly disconnected and stopped using this domestic well (Golder 2009), the well is not known to have been properly abandoned thus it could presumably be used again as a drinking water supply. Residents, workers, or visitors to the Site could be exposed to subsurface contamination in the event of any subsurface disturbance through future construction work or improvements.

LNAPL discharges to sediment and surface water are ongoing. Potential targets include downstream human populations who may use the St. Joe River for recreation (i.e., swimming or fishing) or for drinking water. Ecological receptors in sediment and surface water are also potential targets of the Site contamination.

2.5 Analytical Data

This EE/CA relies primarily on analytical data gathered during the 2007 EPA removal assessment (E & E 2007) and the 2009 EE/CA-related field investigation performed on behalf of Potlatch by Golder (Golder 2010a).

The EPA 2007 removal assessment included the collection of subsurface soil, groundwater, surface water, and LNAPL samples. EPA installed 13 soil borings in the area of the LNAPL plume area. Six of the borings were completed as monitoring wells. Subsurface soil samples were collected from the boreholes. Groundwater samples were collected from the newly installed monitoring wells and several existing monitoring wells. An LNAPL sample was collected from one of the existing wells. Three surface water samples were collected, including from areas near ongoing discharges. All samples were analyzed for VOCs, SVOCs, PCBs, total petroleum hydrocarbons (diesel and heavy oil range), and metals. Table 2-3 presents a summary of the samples collected for the EPA 2007 removal assessment, and the sample locations are indicated

on Figure 2-14. Analytical data summary tables from the EPA 2007 removal assessment are presented in Appendix C. The results of the EPA removal assessment are summarized in Section 2.2.6.

Samples collected from the 2009 field activities performed by Potlatch are summarized in Table 2-4. Potlatch collected samples of surface and subsurface soil, groundwater, LNAPL, surface water, and sediment. Six test pits were excavated in the area of the petroleum plume for the purpose of collecting soil samples (combined into three composite samples) for treatability testing. An additional seven test pits were excavated in the western portion of the Site. Five boreholes were installed in the area of the former UST location north of the present Highway 50. Four monitoring wells were installed downgradient of the petroleum plume area; groundwater samples were collected from new and existing wells, and LNAPL was collected from wells in the LNAPL plume area. Sediment and surface water samples were also collected from seven locations along the bank of the St. Joe River. For the 2009 Potlatch field work, Figure 2-15 indicates test pit locations, Figure 2-16 indicates monitoring well and soil borehole locations, and Figure 2-17 indicates sediment and surface water sample locations.

All 2009 Potlatch samples were analyzed for NWTPH-DX, PCBs, PAHs, and TAL metals, and a subset of the samples were also analyzed for SVOCs and VOCs, as indicated in Table 2-4. The analytical data summary tables for the Potlatch samples are included in Appendix D. Analytical data from the Potlatch EE/CA was reviewed and assessed by a START chemist and found to be usable for this EPA EE/CA. Copies of the START data validation memoranda for the Potlatch data are included in Appendix D. The results of the 2009 Potlatch field work are summarized in Section 2.2.7.

Based on the results of the 2007 and 2009 field sampling events, the following types of chemical compounds were detected in Site media, as summarized below.

Subsurface Soil: DRO, heavy oil-range organics, PCBs, carcinogenic PAHs, non-carcinogenic PAHs, SVOCs, VOCs, metals.

Groundwater: DRO, heavy oil-range organics, PCBs, carcinogenic PAHs, non-carcinogenic PAHs, and other metals.

Sediment: DRO, heavy oil-range organics, PCBs, carcinogenic PAHs, non-carcinogenic PAHs, VOCs, metals.

Surface Water: carcinogenic PAHs, non-carcinogenic PAHs, metals.

2.6 Streamlined Risk Evaluation

2.6.1 Conceptual Site Model

Human Health

The purpose of a conceptual site model (CSM) is to provide a graphic representation of Site conditions as they relate to human health and ecological risk evaluation. A CSM is prepared by

evaluating historical use of a site and surrounding areas. Environmental conditions at a site, including ground conditions and hydrogeology, are also evaluated. The model is used to facilitate selection of removal alternatives and to evaluate the effectiveness of removal actions in reducing human and environmental exposure. The CSM for the Avery Landing Site:

- Identifies the primary source of contamination in the environment (e.g., historical Site activities related to railroad maintenance, refueling, and petroleum spills);
- Shows how chemicals at the original point of release might move in the environment (e.g., discharges to surface water);
- Identifies the different types of human and ecological populations (e.g., recreational visitors, residents, aquatic species) that might come into contact with contaminated media; and
- Evaluates the possibility of those receptors incorporating the contaminants into their bodies by identifying potential exposure pathways (e.g., ingestion of contaminated soil, inhalation of particulates, dermal contact with contaminated soil) that may occur for each human or environmental population.

In a risk evaluation, exposure pathways are the means by which hazardous substances, pollutants, or contaminants move through the environment from a source to a point of contact with people or ecological receptors. An exposure pathway must be considered complete for exposure and subsequent risks to occur. A complete pathway must include the following elements (EPA 1989):

- A source and mechanism for release of constituents;
- A transport or retention medium;
- A point of potential contact (exposure point) with the affected medium; and
- An exposure route.

If one of the above elements is missing, the exposure pathway is not considered complete and is not evaluated in the risk evaluation. The CSM for the Avery Landing Site is presented in Figure 2-18.

Ecological Receptors

The CSM in Figure 2-18 includes a preliminary ecological CSM for the Site. Fish, benthic invertebrates, and other aquatic organisms in the St. Joe River may be exposed to Site-related chemicals through direct contact with contaminants of concern (COCs) or with water and sediments contaminated by COCs; ingestion of COCs or water or sediments contaminated by COCs; and ingestion of contaminated food (e.g., sediment- or soil-dwelling insects or vegetation). Wildlife species that obtain all or part of their food from the St. Joe River may be exposed to Site-related chemicals from ingestion of COCs or from water or sediment contaminated by COCs, or by ingestion of contaminated food (other plant or animal species that have been contaminated by COCs). Terrestrial wildlife species could be exposed to chemicals in surface water from the St. Joe River while drinking; however, drinking typically is an insignificant route of exposure for wildlife, especially when chemical concentrations in surface water are generally low, as they are at this Site (see Section 2.6.3.6).

2.6.2 Streamlined Human Health Evaluation

The human health screening level evaluation provides an initial indication of the possibility of adverse human health effects due to exposure to Site-related contamination. Information on the exposure pathways and screening values used for evaluation is presented below, followed by a discussion of the screening results.

2.6.2.1 Receptors and Exposure Routes

Human receptors at the Site may be exposed to Site-related contamination via contact with soil, surface water, groundwater, indoor air, or fish or other biota (see CSM; Figure 2-18). Routes of exposure include ingestion, dermal absorption, and inhalation. A detailed description of all complete exposure pathways and receptors is provided below.

The banks of the St. Joe River are very steep and the current moves swiftly. Additionally, the river bank adjacent to the LNAPL plume area is covered in rip rap. Therefore, it is unlikely that residents or recreational users would contact sediment. Therefore, sediment exposure was not considered to be a complete exposure pathway and is not evaluated for this human health evaluation.

Residents

The Bencik portion of the Site includes a cottage that is currently occupied seasonally as a vacation home. Seasonal cabins and year-round residences were once located on Site, and there are currently no administrative or legal controls (i.e., institutional controls) that minimize the potential human exposure to contamination by limiting land or resource use at the Site. Therefore, a full-time resident was considered for this evaluation. Residents may be exposed to Site-related contamination in soils via incidental ingestion, dermal contact, or inhalation of soil particulates. In addition, a groundwater supply well is currently located on the Site. While this domestic well has been disconnected from the trailer site connections and is reportedly not in use, there are currently no institutional controls preventing future use of this well, or the installation of another domestic well, as a source of household water. Therefore, exposure to groundwater via ingestion and dermal contact was considered. In addition, volatile chemicals may migrate from the subsurface soils, groundwater, and LNAPL into homes, resulting in inhalation exposure to volatile chemicals.

IDEQ has designated the St. Joe River as a source of water for domestic use (IDEQ 2010). While there are no public water supply intakes in the area of the Site, the possibility exists that future residents may draw water from the river for household use. For this reason, surface water ingestion and dermal contact is considered a complete exposure pathway. In addition, residents may ingest contaminated fish caught from the St. Joe River.

Recreational Users

It is assumed that a recreational user visits the Site occasionally to fish or hunt, and hikers and trespassers may also visit the Site. Typically a recreational user is exposed to fewer media than a permanent resident. However, the Bencik family currently uses the home on the Site when they visit the area for recreation. Therefore, all exposure pathways considered for the resident are also considered for a recreational user, with the exception of subsurface soil direct contact. However,

the exposure frequency (how often the Site is used for recreation) would be considerably less than the exposure frequency for a resident.

2.6.2.2 Screening Values

For this evaluation, the maximum value detected at the Site in each media was compared to media-specific risk-based screening levels. Details on the selection of appropriate screening values are provided below.

Soils

Initial Default Target Levels (IDTLs) published in the Idaho Risk Evaluation Manual (IDEQ 2004) were used as screening values for Site soils for this EE/CA. IDTLs are risk-based concentrations derived from standardized equations that combine default exposure assumptions with EPA toxicity data. The IDTLs are considered to be protective for humans over a lifetime and meeting these levels allows unrestricted (residential) use of the property. IDTLs for soil are the lowest of the following concentrations:

- *Surficial* soil concentrations protective of exposures via *groundwater ingestion* at EPA MCL or equivalent risk-based concentrations at the downgradient edge of the source,
- *Subsurface* soil concentrations protective of exposure via *groundwater ingestion* at MCL or risk-based concentrations at the downgradient edge of the source,
- *Subsurface* soil concentrations protective of exposure via *indoor inhalation* of vapors emanating from soil for a residential scenario (e.g., child or age-adjusted receptor), and
- *Surficial* soil concentrations protective of *combined ingestion, dermal contact, and outdoor inhalation* exposures for a residential scenario (IDEQ 2004).

For several chemicals, IDTLs were not available. For these chemicals, EPA's *Regional Screening Levels for Chemical Contaminants at Superfund Sites* (EPA 2010) for residential exposure were used for screening purposes. In the case of petroleum hydrocarbons (diesel range organics and heavy oils), IDTLs or Regional Screening Levels (RSLs) were not available.

Any building or excavation of the Site may result in subsurface soils being brought to the surface. Therefore, subsurface and surface soils were considered together for this evaluation.

Groundwater

IDTLs were also used as screening values for groundwater. IDTLs for groundwater are the lowest of the following concentrations:

- The maximum value detected for chemicals having MCLs or calculated values for ingestion of water by either a child, an adolescent, an adult, or an age-adjusted individual in a residential scenario, or
- Groundwater concentrations protective of indoor inhalation for a residential scenario (e.g., child or age-adjusted receptor). (IDEQ 2004)

For several chemicals, groundwater IDTLs were not available, so EPA RSLs were used for screening purposes. In the case of petroleum hydrocarbons (DRO and heavy oils), IDTLs or RSLs were not available.

Surface Water and Consumption of Aquatic Organisms

As stated previously, IDEQ has designated the St. Joe River as a source of water for domestic use. Several screening metrics were used for evaluation of surface water. First, IDEQ's Water Quality Standards (IDAPA 58.01.02) were used. There are two water quality standards based on human consumption. The first standard is based on the assumption that surface water is used as a domestic water supply and that organisms living in the surface water may be consumed. The second value is based on consumption of organism only (recreational use). Both values were developed for the protection of human health and are based on exposure and toxicity information.

2.6.2.3 Screening Evaluation Results

Maximum concentrations of chemicals detected in each media were compared with health-based screening levels. Tables 2-5, 2-7, and 2-8 provide the maximum detected value, the screening criteria, and the result of the screening for soils, groundwater, and surface water, respectively. In addition, the frequency of exceedance (FoE) of screening levels is included to provide an indication of the extent of contamination. Results for each medium are provided below.

Soils

Table 2-5 provides soil screening results for the human health evaluation. Residents and recreational users may be exposed to Site soils via incidental ingestion, dermal contact, inhalation of particulates, or inhalation of volatile chemicals emanating from subsurface soils into structures. Maximum soil concentrations exceeded screening levels for a number of chemicals, including some metals, VOCs, PAHs, and SVOCs. Of particular concern is the number of samples that exceeded screening levels for benzo(a)pyrene (a known carcinogen). Results indicate benzo(a)pyrene screening level concentrations were exceeded in 11 of 56 samples. Other carcinogenic PAHs, including benzo(a)anthracene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene, also exceeded criteria but at a much lower frequency (1 of 56 samples for each). Three non-carcinogenic PAHs also exceeded screening levels: naphthalene (7 of 56 samples), 2-methylnaphthalene (8 of 56 samples), and 1-methylnaphthalene (1 of 56 samples).

Several VOCs, including some known carcinogens, exceeded screening levels, including 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, sec-butylbenzene, benzene, xylenes, and trichloroethene. The FoE for the volatile organics ranged from one to three exceedances.

PCBs were detected in several Site soil samples, but the concentrations did not exceed screening levels.

If the maximum detected metal concentration exceeded screening criteria, the maximum concentration was compared to background levels developed for the nearby Upper Coeur d'Alene River Basin (URS Greiner 2001). This was the case for antimony, arsenic, iron, lead, manganese, and mercury. The arsenic screening criterion was exceeded in all samples (FoE 38/38). However, only three samples exceeded background concentrations. Similarly, eight of 38 lead samples exceeded screening values, while only one sample exceeded background levels. In the case of iron, magnesium, and mercury, none of the sample concentrations was higher than the background concentration, while in 22 of 38 samples manganese exceeded screening levels, and in 27 of 38 samples mercury exceeded screening levels. Concentrations in one of 38 samples

exceeded screening values for antimony, while 11 samples exceeded background. Table 2-6 provides a comparison of maximum concentrations of metals to background concentrations. The data suggests that metals concentrations may be naturally elevated at the Site.

The results of the soil screening evaluation indicate that numerous chemicals exceeded health-based screening criteria.

Groundwater

Table 2-7 provides groundwater screening results for the human health evaluation. Residents and recreational users may be exposed to groundwater via ingestion, dermal contact, and inhalation of volatile chemicals emanating from groundwater into structures. Exceedances were noted for Aroclor 1260, several carcinogenic and non-carcinogenic PAHs, SVOCs, and metals. The carcinogenic PAHs benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene exceeded criteria in one to two samples out of 21 samples analyzed. While the FoE was low for the carcinogenic PAHs, the maximum detected values were far greater than the health-based screening level, particularly for benzo(a)anthracene (1.6 micrograms per liter [$\mu\text{g/L}$] vs. 0.077 $\mu\text{g/L}$). Two non-carcinogenic PAHs also exceeded screening levels, including 1-methylnaphthalene (5 of 21 samples) and 2-methylnaphthalene (1 of 21 samples). The SVOCs 4,6-dinitro-2-methylphenol (1 of 5) and n-nitrosodiphenylamine (1 of 9) exceeded criteria, as did arsenic (10 of 21), cobalt (2 of 21), iron (13 of 21), lead (1 of 21), and manganese (13 of 21).

The results of the groundwater screening evaluation indicate that numerous chemicals exceeded health-based screening criteria.

Surface Water and Aquatic Organisms

Table 2-8 provides surface water screening results. The St. Joe River is considered a domestic use water body. Thus, residents and recreational users may be exposed to surface water via ingestion, dermal contact, and ingestion of aquatic organisms. Free product is present in surface water, which violates state water quality regulations. Surface water domestic water supply criteria were exceeded for the carcinogenic PAHs benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene, with an FoE of one to two samples out of 11 analyzed. Screening criteria based on recreational use of the Site were exceeded for two carcinogenic PAHs, including benzo(a) pyrene and benzo(b)fluoranthene, with an FoE of one sample each. Surface water screening values based on consumption of aquatic organisms only were not exceeded.

2.6.2.4 Uncertainties

Sources of uncertainty in this streamlined human health risk evaluation include:

- Risk-based screening soil values are not available for some chemicals detected at the Site, including 4-isopropyltoluene, N-propylbenzene, 2-hexanone, bis(2-chloroethoxy)methane, and carbazole. Groundwater screening levels were not available for carbazole in groundwater. However, because most of these chemicals were detected infrequently and were found at low levels they are unlikely to pose a threat to human health at the Site.

- Surface water standards for recreational use (including ingestion of aquatic organisms) were not available for the majority of chemicals. These chemicals could not be screened for this evaluation. However, humans are unlikely to contact surface water on a regular and sustained basis, and the absence of surface water standards for some of the chemicals detected in Site surface waters suggests these chemicals are unlikely to have an appreciable effect on the risk evaluation conclusions.
- The detection limits were above screening values for some analytes in some samples, while other samples had detection limits below the screening level. This was the case with PAHs in soils. However, for these COCs, at least some of the samples with detection limits below the screening level exhibited concentrations above the screening level; thus, these chemicals were selected as COCs. The detection limit variations may impact the FoE but not the selection of COCs, and thus the impact on the risk evaluation is minimal.
- The data suggests that metals concentrations may be naturally elevated at the Site. It is not clear how representative the background concentrations from the Upper Coeur d'Alene River Basin (URS Greiner 2001) are to Site conditions.

2.6.2.5 Conclusions of the Human Health Risk Evaluation

Soil, groundwater, and surface water show evidence of being impacted by Site-related contamination. Numerous analytes in all media exceed health-based screening criteria, indicating the potential for adverse health effects due to exposure to Site-related contamination. In particular, carcinogenic PAHs exceeded screening criteria for all media and some metals exceeded screening levels in soils and groundwater.

2.6.3 Streamlined Ecological Risk Evaluation

2.6.3.1 Site Ecological Characteristics

The Avery Landing Site is located along the north shoreline of the St. Joe River in Avery, Idaho. The Site is 640 meters long from east to west and extends inland from the river for a distance of 40 to 100 meters. The Site has been used for commercial and transportation (railroad) purposes for many decades and is highly disturbed. Most of the Site is covered by gravel or dirt roads and surfaces and mowed areas. One seasonal residence, a shed (used to store absorbent boom), an AST, and drums of IDW from EPA's 2007 removal assessment are currently located on the Site. As a result of its disturbed nature and ongoing human use, the Site has limited value as habitat for plants and wildlife.

The St. Joe River forms the southern boundary of the Site. According to IDEQ (2010), the St. Joe River is considered a special resource water. It supports cold-water fish communities and provides spawning habitat for salmon and trout. In addition, the river near the Site is considered suitable for primary contact recreation and domestic water supply. Overall, the river appears to be a high-quality aquatic habitat capable of supporting a wide variety of benthic invertebrates and fish as well as wildlife species that use aquatic habitats to satisfy their food and habitat needs. Wildlife species expected to use the St. Joe River near the Site include waterfowl, wading birds, shorebirds, and fish-eating mammals. The bull trout is a federally endangered species that is found in the St. Joe River. Additionally, State of Idaho species of concern found in the river include the bull trout, Westslope cutthroat trout, and Coeur d'Alene salamander.

2.6.3.2 Ecological Receptors

As noted above, because the Site is disturbed and experiences ongoing human use, its value as habitat for plants and wildlife is limited. Some common terrestrial wildlife species may visit the Site, but the Site does not provide adequate cover and food to support a diverse and abundant wildlife community. In contrast, the St. Joe River is considered a high-quality aquatic habitat and likely supports diverse and abundant communities of benthic invertebrates, fish, and other aquatic organisms, and provides habitat and food for semi-aquatic wildlife.

2.6.3.3 Preliminary CSM

Figure 2-18 provides a preliminary ecological CSM for the Site featuring the ecological receptor groups identified in the previous section. Aquatic vegetation, fish, benthic invertebrates, and other aquatic organisms in the St. Joe River may be exposed to Site-related chemicals in the following ways: (1) direct contact with and ingestion of contaminants at product discharges; (2) direct contact with and ingestion of contaminated water and sediment; and (3) through the food chain (i.e., by consuming plant and animal materials that have accumulated Site-related chemicals). Wildlife species that obtain all or part of their food from the St. Joe River near the Site may be also exposed in these ways. Exposure of terrestrial plants and wildlife to Site-related chemicals is possible in areas along the shoreline where oiled vegetation has been observed, but these areas are limited in extent.

2.6.3.4 Assessment Endpoints and Measures

In ecological risk evaluations, assessment endpoints are expressions of the ecological resources that are to be protected (EPA 1997). An assessment endpoint consists of an ecological entity and a characteristic of the entity that is important to protect. According to EPA (1998), assessment endpoints do not represent a desired achievement or goal, and should not contain words such as protect or restore or indicate a direction for change such as loss or increase. Assessment endpoints are distinguished from management goals by their neutrality (EPA 1998).

Measurements used to evaluate risks to the assessment endpoints are termed “measures” and may include measures of effect (e.g., results of toxicity tests), measures of exposure (e.g., chemical concentrations in sediment), and/or measures of ecosystem and receptor characteristics (e.g., habitat characteristics; EPA 1998). Based on the Site ecology, Site-related chemicals, and preliminary CSM, the ecological resources potentially at risk at the Avery Landing Site are those associated with the St. Joe River, including aquatic vegetation, fish, benthic invertebrates, wildlife that obtain all or part of their food from the river, and terrestrial plants and animals in shoreline areas where product discharges have been observed. The assessment endpoints and measures for these receptor groups are stated below.

Aquatic Vegetation Community

Assessment Endpoint: Sustainability (survival, growth, and reproduction) of the aquatic macrophyte community in the St. Joe River near the Site.

Measure: Measured concentrations of Site-related chemicals in surface water from the St. Joe River near the Site compared with water quality standards and benchmarks.

Benthic Invertebrate Community

Assessment Endpoint: Sustainability (survival, growth, and reproduction) of the benthic invertebrate community in the St. Joe River near the Site.

Measure: Measured concentrations of Site-related chemicals in sediment from the St. Joe River near the Site compared with sediment benchmarks for effects on benthic invertebrates.

Fish Community

Assessment Endpoint: Sustainability (survival, growth, reproduction) of the fish community in the St. Joe River near the Site.

Measure: Measured concentrations of Site-related chemicals in surface water from the St. Joe River compared with water quality standards and benchmarks.

Semi-aquatic and Riparian Wildlife

Assessment endpoint: Sufficient rates of survival, growth, and reproduction of herbivorous, piscivorous, and benthivorous birds and mammals to sustain healthy populations along the St. Joe River near the Site.

Measure: None. Modeling food-chain uptake and dietary exposure for semi-aquatic wildlife is beyond the scope of this streamlined risk evaluation.

Terrestrial Riparian Plant Community

Assessment endpoint: Sustainability (survival, growth, and reproduction) of the shoreline terrestrial plant community at the Site.

Measure: None. Soil samples were not collected from shoreline areas where product discharges were occasionally observed.

2.6.3.5 Data Sources

To assess potential ecological risks, this streamlined risk evaluation uses surface water and sediment samples collected from the St. Joe River near the Site.

2.6.3.6 Surface Water Screening Results

Eleven surface water samples were collected from the St. Joe River at the Site (see Section 2.5 for sampling locations). The samples were analyzed for PAHs, other SVOCs, diesel- and oil-range organics, and selected metals. Table 2-9 lists the chemicals that were detected in at least one sample, frequency of detection, maximum detected concentration, and water quality standards and benchmarks for protection of aquatic life. State of Idaho water quality standards were used preferentially. If an Idaho standard was not available for a chemical, then an alternate surface water benchmark for that chemical was taken from Suter and Tsao (1996). Only one organic compound, benzo(a)pyrene, in one sample, was detected at a concentration in excess of its water quality standard or benchmark. Diesel- and oil-range organics were detected in two samples and one sample, respectively. There are no water quality standards for these parameters. Only one metal, manganese, exceeded its water quality standard. The manganese may be from natural sources. Overall, the surface water data suggest that petroleum contamination in

subsurface soil and groundwater at the Site may be reaching the St. Joe River, but the level of impact in the Site vicinity appears to be low.

2.6.3.7 Sediment Screening Results

Sixteen sediment samples were collected from the St. Joe River at the Site (see Section 2.5 for sampling locations). The samples were analyzed for PAHs, other SVOCs, DRO, heavy oils, PCBs, and metals. Table 2-10 lists the chemicals that were detected in at least one sample, frequency of detection, maximum detected concentration, and sediment screening levels for protection of freshwater benthos. Regional Sediment Evaluation Team (RSET 2006) screening levels for freshwater sediments in the Pacific Northwest were used preferentially. If a RSET (2006) screening level was not available, then an alternate screening level for that chemical was taken from MacDonald et al. (1999). Two metals, arsenic and lead, marginally exceeded their screening levels. Antimony greatly exceeded its screening level. It is unclear whether these metals are associated with subsurface petroleum contamination at the Site. DRO and heavy oil were frequently detected. There are no freshwater sediment standards for these parameters. Two PAHs, acenaphthene and fluorine, exceeded their respective screening levels, but only marginally. Overall, the sediment data suggest that petroleum contamination in subsurface soil and groundwater at the Site may be reaching the St. Joe River.

2.6.3.8 Uncertainties

Sources of uncertainty in this streamlined risk evaluation include:

- No ecological risk-based concentrations are available for diesel- and oil-range organics in surface water and sediment. As a result, the potential risks posed by these substances to aquatic life in the St. Joe River cannot be quantitatively assessed. However, this is not considered to be a significant shortcoming of the streamlined risk evaluation because the most toxic constituents of petroleum, PAHs, were evaluated.
- Not all chemicals detected in surface water and sediment at the Site have risk-based screening values available. For example, no benchmarks are available for most substituted benzenes, substituted phenol, and SVOCs detected in sediment at the Site (see Table 2-10 under *Other Organic Chemicals*). However, because these chemicals were detected infrequently, were found at low levels, and are not highly persistent, it seems unlikely that they would pose a significant ecological risk at the Site.
- Modeling food-chain uptake and dietary exposure of Site-related chemicals for semi-aquatic and riparian wildlife was beyond the scope of this streamlined evaluation. However, in order for potential wildlife risks at the Site to be significant, the extent of petroleum contamination in the St. Joe River would need to be large and the concentration of PAHs would need to be high. Such a situation does not appear to exist at this Site based on the available data on surface water and sediment.
- Potential risks to aquatic biota and benthic invertebrates were not assessed directly. Instead, the streamlined risk evaluation relied on comparing surface water and sediment data with standards and benchmarks. These comparisons are conservative because the standards and benchmarks are designed to be protective of the most sensitive aquatic

species. Hence, potential risks to aquatic vegetation, fish, and benthic invertebrates at the Site may have been overestimated by the measures used to evaluate these assessment endpoints.

2.6.3.9 Conclusions of Ecological Risk Evaluation

Surface water and sediment samples from the St. Joe River near the Avery Landing Site show evidence of being impacted by petroleum contamination. In particular, diesel- and oil-range organics were frequently detected in sediment and occasionally in surface water. In addition, selected PAHs in sediment and surface water exceeded risk-based concentrations. Furthermore, oiled vegetation has been observed along the shoreline in some areas.

2.6.4 Contaminants of Concern

Petroleum product is discharging to the St. Joe River in contravention of the CWA and Idaho regulations. The petroleum product is also present in subsurface soil and on the groundwater as LNAPL, where it is present in excess of State of Idaho thresholds (0.1 inch). The observations of product and LNAPL are supported by analytical data, which indicated the presence of DRO and heavy oil in Site media. Therefore, a primary COC for the Site is the petroleum.

Additionally, CERCLA hazardous substances, including carcinogenic PAHs, are present in Site media above screening levels. The results of the human health and ecological streamlined risk evaluations indicate that Site contaminants are impacting Site media. Many of these CERCLA hazardous substances, including the PAHs, may be associated with petroleum and are considered COCs. Table 2-11 summarizes the COCs that exceeded screening levels.

Table 2-1
Summary of TPH/LNAPL Observations in Boreholes and Test Pits (2007 and 2009)
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Feature ID	Investigation	Feature Type	Location	Field Observations from Borehole Logs	Visible TPH Depth (feet bgs)
EMW-01	EPA 2007	monitoring well	Upgradient	None.	
EMW-02	EPA 2007	monitoring well	LNAPL plume area	5-7, moderately strong hydrocarbon odor. 7-9 product	7-9
EMW-03	EPA 2007	monitoring well	Central, downgradient of plume area	None.	
EMW-04	EPA 2007	monitoring well	LNAPL plume area	11 - 13 Hydrocarbon sheen on groundwater. 13 - 17 Oily hydrocarbon product present on downhole tools (poor recovery in sampling tool).	11-17
EMW-05	EPA 2007	monitoring well	LNAPL plume area	9 - 11 strong hydrocarbon odor 11-13 strong hydrocarbon odor and sheen 13-15 Strong hydrocarbon odor; sheen and drops of black product in groundwater.	11-15
EMW-06	EPA 2007	monitoring well	LNAPL plume area	7 - 9 Hydrocarbon odor and sheen 9 - 11 hydrocarbon odor and black oily liquid 11-13 sand and gravel stained black with an oily liquid 13-18 soil cuttings contain an oily liquid	7-18
ESB-01	EPA 2007	soil boring	LNAPL plume area	7 - 9 Hydrocarbon sheen and odor on groundwater.	7-9
ESB-02	EPA 2007	soil boring	LNAPL plume area	None.	
ESB-03	EPA 2007	soil boring	LNAPL plume area	9 - 11 Slight hydrocarbon odor. 11 - 13 Strong hydrocarbon odor, product.	11-13
ESB-04	EPA 2007	soil boring	LNAPL plume area	3 - 5 Hydrocarbon odor and sheen. 5 - 7 Hydrocarbon odor. 7 - 9 Strong hydrocarbon odor and product.	3-9
ESB-05	EPA 2007	soil boring	LNAPL plume area	3 - 5 Hydrocarbon odor and sheen. 7 - 9 Strong hydrocarbon odor, light sheen. 11 - 13 Very dense, black oily liquid with strong hydrocarbon odor. 15 - 17 Hydrocarbon odor.	3-17
ESB-06	EPA 2007	soil boring	LNAPL plume area	7 - 9 Hydrocarbon odor. 11 - 13 Strong hydrocarbon odor and oily liquid.	11-13
ESB-07	EPA 2007	soil boring	LNAPL plume area	5 - 7 Hydrocarbon odor. 9-11 Increased hydrocarbon odor and sheen. 13-15 Hydrocarbon odor and heavy sheen/product. 15-17 Hydrocarbon odor and heavy sheen/product.	9-17

Table 2-1
Summary of TPH/LNAPL Observations in Boreholes and Test Pits (2007 and 2009)
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Feature ID	Investigation	Feature Type	Location	Field Observations from Borehole Logs	Visible TPH Depth (feet bgs)
TP-01	Potlatch 2009	Test Pit	Western Area	Petroleum-like odor begins at 10 ft bgs.	
TP-02	Potlatch 2009	Test Pit	Western Area	No visibly impacted media.	
TP-03	Potlatch 2009	Test Pit	Western Area	Oil odor at 11 ft bgs. Oil staining at 13 ft. bgs. Sheen and oil drops on GW.	13-13.5
TP-04	Potlatch 2009	Test Pit	Western Area	No visibly impacted media.	
TP-05	Potlatch 2009	Test Pit	Western Area - former rail spur	No visibly impacted media.	
TP-05N	Potlatch 2009	Test Pit	Western Area - former rail spur	No observations provided.	
TP-06	Potlatch 2009	Test Pit	Western Area - former rail spur	Odor begins at 8 ft bgs. Product at 17 ft bgs.	16-17
TP-07	Potlatch 2009	Test Pit	Western Area	No impacted media observed.	
TP-08	Potlatch 2009	Test Pit	Western Area	Stained soil from 3 ft bgs to water table. Strong odor below 13 ft bgs. Oil globules on GW at 14 ft bgs.	3-14
TS-01	Potlatch 2009	Treatability Study Test Pit	LNAPL Plume Area	Odor on samples beginning at 10 ft bgs. Oil beginning at 14 ft bgs.	14-15
TS-02	Potlatch 2009	Treatability Study Test Pit	LNAPL Plume Area	Odor beginning at 8.5 ft bgs.	
TS-03	Potlatch 2009	Treatability Study Test Pit	LNAPL Plume Area	"Impacted" soil from 3 ft bgs to bottom. Strong odor below 10.5 ft bgs. Gravel saturated with oil.	3-18
TS-04	Potlatch 2009	Treatability Study Test Pit	LNAPL Plume Area	Odor begins at 7.5 ft bgs. Impacted soil below 12 ft bgs.	12-16
TS-05	Potlatch 2009	Treatability Study Test Pit	LNAPL Plume Area	No specific petroleum observations reported.	
TS-06	Potlatch 2009	Treatability Study Test Pit	LNAPL Plume Area	Impacted soil below 12 ft bgs. Heavy oil staining below 14 ft bgs. Oil visible on cobbles and boulders.	12-20
BH-1	Potlatch 2009	Borehole	Near former AST / Highway 50	LNAPL in soil at 13 and 15-20 ft bgs. LNAPL on GW.	13-20
BH-2	Potlatch 2009	Borehole	Near former AST / Highway 50	Oil in sand 15-20 ft bgs. LNAPL on GW.	15-20
BH-3	Potlatch 2009	Borehole	Near former AST / Highway 50	Petroleum odor and sheen 10-11.5 ft bgs. LNAPL on GW.	7.5-15
BH-4	Potlatch 2009	Borehole	Near former AST / Highway 50	Petroleum odor and sheen 7.5 to 15 ft bgs. LNAPL on GW.	7.5-15
BH-5	Potlatch 2009	Borehole	Near former AST / Highway 50	Petroleum odor and sheen 5-15 ft bgs. Sheen on GW.	5-17
GA-1	Potlatch 2009	Monitoring Well Borehole	Western Area	LNAPL and sheen present 15-21 ft bgs.	15-21
GA-2	Potlatch 2009	Monitoring Well Borehole	Western Area	None observed.	
GA-3	Potlatch 2009	Monitoring Well Borehole	Western Area	Sheen on GW.	15-22
GA-4	Potlatch 2009	Monitoring Well Borehole	Western Area	None observed.	

Data sources: EPA 2007 (E & E 2007)
Potlatch 2009 (Golder 2010)

Key:
bgs = below ground surface
LNAPL = light non-aqueous phase liquid
TPH = total petroleum hydrocarbon

Table 2-2
Summary of LNAPL Observations in Monitoring Wells (2007 and 2009)
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Monitoring Well	LNAPL Thickness (feet)		
	EPA April 2007	Potlatch September 2009	Potlatch November 2009
EMW-01	--	--	--
EMW-02	--	--	--
EMW-03	--	--	--
EMW-04	--	"Thin Layer"	Drop Tube ⁽²⁾
EMW-05	--	--	--
EMW-06	--	0.24	Drop Tube ⁽²⁾
HC-1R	--	--	--
HC-4	0.88	Not Sampled	1.24 (no water)
MW-5	--	--	--
MW-11	Present (no water) ⁽¹⁾	Present, no water	3.73 (no water)
TP-2 (#1010)	0.72	"Thin Layer" (no water)	Present (could not determine DTW) ⁽¹⁾
EW-3	Present (no water) ⁽¹⁾	--	--
EW-4	Present (no water) ⁽¹⁾	--	--
DW-01	Not Sampled	--	--
GA-1	Not Sampled	0.01	--
GA-2	Not Sampled	--	--
GA-3	Not Sampled	--	--
GA-4	Not Sampled	--	--

Notes: (1) Product was present but thickness could not be determined.

(2) A drop tube was installed in the monitoring well to allow for groundwater sampling without cross-contamination from the LNAPL. Therefore, an accurate product thickness could not be determined.

Key:

-- = no LNAPL/product detected

LNAPL = light non-aqueous phase liquid

Table 2-3
Summary of Samples, EPA 2007 Removal Assessment
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

EPA Sample ID	Location ID	Sample Date	Matrix	Analyses
07040101	EMW-01 SB 06	4/16/2007	Soil	VOCs
07040102	EMW-01 SB 02	4/16/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040103	EMW-02 SB 05	4/17/2007	Soil	VOCs
07040104	EMW-02 SB 07	4/17/2007	Soil	SVOCs and PCBs
07040105	EMW-02 SB 05	4/17/2007	Soil	TAL Metals and NWTPH-Dx
07040106	EMW-03 SB 11	4/17/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040107	EMW-03 SB 11	4/17/2007	Soil	VOCs
07040108	EMW-04 SB 03	4/17/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040109	EMW-05 SB 09	4/18/2007	Soil	VOCs
07040110	EMW-05 SB 09	4/18/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040111	RB-01 (Rinse Blank)	4/18/2007	Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040112	EMW-06 SB 07	4/18/2007	Soil	VOCs
07040113	EMW-06 SB 07	4/18/2007	Soil	TAL Metals
07040114	EMW-06 SB 09	4/18/2007	Soil	SVOCs, PCBs, and NWTPH-Dx
07040115	ESB-01 SB 07	4/18/2007	Soil	VOCs
07040116	ESB-01 SB 07	4/18/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040117	ESB-02 SB 03	4/18/2007	Soil	SVOCs, PCBs, and TAL Metals
07040118	ESB-03 SB 09	4/18/2007	Soil	VOCs
07040119	ESB-03 SB 11	4/18/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040120	ESB-04 SB 03	4/18/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040121	ESB-04 SB 07	4/18/2007	Soil	VOCs
07040122	ESB-04 SB 07	4/18/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040123	ESB-05 SB 09	4/19/2007	Soil	VOCs
07040124	ESB-05 SB 15	4/19/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040125	ESB-05 SB 23	4/19/2007	Soil	SVOCs and PCBs
07040126	ESB-06 SB 09	4/19/2007	Soil	VOCs
07040127	ESB-06 SB 11	4/19/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040128	ESB-07 SB 07	4/19/2007	Soil	VOCs
07040129	ESB-07 SB 13	4/19/2007	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040130	TB-01 (Trip Blank)	4/20/2007	Water	VOCs
07040131	HC-4	4/20/2007	Product	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040132	SW-01	4/20/2007	Surface Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040133	SW-02	4/20/2007	Surface Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040134	SW-03	4/20/2007	Surface Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040135	EMW-01	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040136	EMW-02	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040137	EMW-03	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040138	EMW-04	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040139	EMW-05	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040140	EMW-06	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040141	HC-1	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040142	MW-5	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040143	DW-01	4/21/2007	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx

Note: The two digits at the end of the soil sample Location ID indicates the depth, in feet below ground surface, where the sample was collected.

Key:

- DW = domestic well
- EMW = EPA monitoring well
- EPA = U.S. Environmental Protection Agency
- ESB = EPA soil boring
- HC = Hart Crowser
- ID = identification
- MW = monitoring well
- NWTPH-Dx = Northwest Total Petroleum Hydrocarbons, Diesel-Range Extended
- PCBs = polychlorinated biphenyls
- RB = rinse blank
- SB = soil boring
- START = Superfund Technical Assessment and Response Team
- SVOCs = semivolatile organic compounds
- SW = surface water
- TAL = Target Analyte List (Metals)
- TB = trip blank

Table 2-4
Summary of Samples, Potlatch 2009 Field Investigation
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Sample ID	Date Collected	Matrix	Sample Type/Description	Analyses
GTP1-2.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP1-10.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP1-13.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP2-2.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP2-8	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP2-13	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP3-3.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP3-5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP3-13.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP4-2.5	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP4-6.0	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP4-8.0	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP5-3.0	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP5-7.0	8/27/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP5-11	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP6-2.5	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP6-10	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP6-17	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP7-2.5	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP7-10.0	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
GTP7-18	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
TS-COMP-1 (TS-01 & TS-04)	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
TS-COMP-2 (TS-02 & TS-03)	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
TS-COMP-3 (TS-05 & TS-06)	8/28/2009	Soil	Test Pits	TPH, PCBs, PAHs, TAL Metals, SVOCs, VOCs
G-BH1-Surf	8/28/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH1-7.5	8/28/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH1-16	8/28/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH2-Surf	8/28/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH2-7.5	8/28/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH2-15	8/28/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH3-Surf	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH3-7.5	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH3-15	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH4-Surf	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH4-7.5	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH4-15	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH5-Surf	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH5-7.5	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-BH5-15	8/27/2009	Soil	Borehole	TPH, PCBs, PAHs
G-GA1-21	8/26/2009	Soil	Borehole (GA1)	TPH, PCBs, PAHs
G-GA3-20	8/26/2009	Soil	Borehole (GA3)	TPH, PCBs, PAHs
G-GA1	09/05/09	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-GA2	9/2/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals
G-GA3	9/3/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-GA4	9/2/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-DW01	9/2/2009	Groundwater	Domestic Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-MW5	9/3/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals
G-HC1R	9/4/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals
G-EW3	9/4/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-EW4	9/4/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals
G-EMW04	9/4/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-EMW05	09/05/09	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-EMW06	9/5/2009	Groundwater	Monitoring Well	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-MW11FP	9/1/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals
G-P1010FP	9/4/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals
G-HC4FP	11/19/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals
G-RS5FP	9/5/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals
G-RS4FP	9/5/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals
G-RS3FP	9/5/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals

Table 2-4
Summary of Samples, Potlatch 2009 Field Investigation
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Sample ID	Date Collected	Matrix	Sample Type/Description	Analyses
G-RS3aFP	9/5/2009	LNAPL	N.A.	TPH, PCBs, TAL Metals
G-RS1SED-0	9/7/2009	Sediment	Station 1, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS1SED-4	9/7/2009	Sediment	Station 1, 4 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS2SED-0	9/7/2009	Sediment	Station 2, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS2SED-3	9/7/2009	Sediment	Station 2, 3 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS3SED-0	9/7/2009	Sediment	Station 3, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS3SED-4	9/7/2009	Sediment	Station 3, 4 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS4SED-0	9/7/2009	Sediment	Station 4, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS4SED-4	9/7/2009	Sediment	Station 4, 4 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS-5SED-0	9/8/2009	Sediment	Station 5, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS5SED-4	9/7/2009	Sediment	Station 5, 4 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS6SED-0	9/7/2009	Sediment	Station 6, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS6SED-3	9/7/2009	Sediment	Station 6, 3 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS7SED-0	9/7/2009	Sediment	Station 7, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS7SED-4	9/7/2009	Sediment	Station 7, 4 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS8SED-0	9/7/2009	Sediment	Station 8, 0 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS8SED-3	9/7/2009	Sediment	Station 8, 3 feet from bank	TPH, PCBs, PAHs, TAL Metals
G-RS1SW	9/6/2009	Surface Water	Station 1	TPH, PCBs, PAHs, TAL Metals
G-RS2SW	9/6/2009	Surface Water	Station 2	TPH, PCBs, PAHs, TAL Metals
G-RS3SW	9/6/2009	Surface Water	Station 3	TPH, PCBs, PAHs, TAL Metals
G-RS4SW	9/6/2009	Surface Water	Station 4	TPH, PCBs, PAHs, TAL Metals
G-RS5SW	9/6/2009	Surface Water	Station 5	TPH, PCBs, PAHs, TAL Metals, Dissolved Metals
G-RS6SW	9/6/2009	Surface Water	Station 6	TPH, PCBs, PAHs, TAL Metals
G-RS7SW	9/6/2009	Surface Water	Station 7	TPH, PCBs, PAHs, TAL Metals
G-RS8SW	9/6/2009	Surface Water	Station 8	TPH, PCBs, PAHs, TAL Metals

Key:

PAHs = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyles
SVOCs = semivolatile organic compounds
TAL = target analyte list
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds

Table 2-5
Human Health Assessment Soil Screening Results
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Analyte	Number of Valid Samples	Number of Detects	Maximum Detected Concentration (mg/kg)	Screening Value ^c (mg/kg)	Screening Value Source	COC	Frequency of Exceedance
Volatile Organic Compounds							
1,2,4-Trimethylbenzene	24	10	53	0.19	IDTL	YES	3
1,2-Dichlorobenzene	24	3	0.037	5.3	IDTL	No (max < IDTL)	0
1,3,5-Trimethylbenzene	24	7	13	0.15	IDTL	YES	2
1,4-Dichlorobenzene	24	1	0.0064	0.076	IDTL	No (max < IDTL)	0
4-Isopropyltoluene	24	14	27	na	IDTL	--	--
Benzene	35	5	0.045 J	0.018	IDTL	YES	3
cis-1,2-Dichloroethene	35	1	0.095	0.19	IDTL	No (max < IDTL)	0
Ethylbenzene	35	17	3.2	10	IDTL	No (max < IDTL)	0
Isopropylbenzene	24	9	1.6	3.5	IDTL	No (max < IDTL)	0
Methylene Chloride	35	2	1.6 J	0.017	IDTL	No ^f	1
m-Xylene & p-Xylene^a	35	19	9	1.7	IDTL	YES	1
n-Butylbenzene	24	3	0.71	1.2	IDTL	No (max < IDTL)	0
N-Propylbenzene	24	9	4.3	na	IDTL	--	--
o-Xylene	35	16	5.5	1.7	IDTL	YES	1
sec-Butylbenzene	24	7	4.5	1.2	IDTL	YES	1
tert-Butylbenzene	24	4	0.16	0.85	IDTL	No (max < IDTL)	0
Toluene	35	15	0.4	4.9	IDTL	No (max < IDTL)	0
Trichloroethene	35	5	0.17	0.0029	IDTL	YES	3
2-Butanone	11	9	0.054 J	12	IDTL	No (max < IDTL)	0
2-Hexanone	11	1	0.006 J	na	IDTL	--	--
Acetone	11	11	0.23 J	17	IDTL	No (max < IDTL)	0
Carbon disulfide	11	4	0.0031	6.0	IDTL	No (max < IDTL)	0
Chlorobenzene	11	3	0.031 J	0.62	IDTL	No (max < IDTL)	0
Styrene	11	1	0.0028 J	1.8	IDTL	No (max < IDTL)	0
Polychlorinated Biphenyls (PCBs)							
Aroclor 1260	56	13	0.13	0.15	IDTL	No (max < IDTL)	0
Bulk Petroleum Parameters							
Diesel Range Organics	54	42	17,000	none	na	No (no standard)	na
Heavy Oils	54	45	12,800	none	na	No (no standard)	na
Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs)							
Benzo(a)anthracene	56	31	0.86	0.42	IDTL	YES	1
Benzo(a)pyrene	56	30	0.65	0.042	IDTL	YES	11
Benzo(b)fluoranthene	56	28	0.49	0.42	IDTL	YES	1
Benzo(k)fluoranthene	56	16	0.027	4.2	IDTL	No (max < IDTL)	0
Chrysene	56	40	1.9	33	IDTL	No (max < IDTL)	0
Dibenzo(a,h)anthracene	56	12	0.245	0.042	IDTL	YES	1
Indeno(1,2,3-cd)pyrene	56	27	0.277	0.42	IDTL	No (max < IDTL)	0
Non-Carcinogenic PAHs							
1-Methylnaphthalene^b	56	26	30	22	RSL	YES	1
2-Methylnaphthalene	56	27	44	3.3	IDTL	YES	8
Acenaphthene	56	22	3.2	52	IDTL	No (max < IDTL)	0
Acenaphthylene	56	6	0.0186	78	IDTL	No (max < IDTL)	0
Anthracene	56	31	1.55	1,040	IDTL	No (max < IDTL)	0
Benzo(g,h,i)perylene	56	39	0.48	1,178	IDTL	No (max < IDTL)	0
Fluoranthene	56	39	1.4	364	IDTL	No (max < IDTL)	0
Fluorene	56	27	4.9	55	IDTL	No (max < IDTL)	0
Naphthalene	56	25	6.0 J	1.1	IDTL	YES	7
Phenanthrene	56	35	5.8	79	IDTL	No (max < IDTL)	0
Pyrene	56	43	3.2	359	IDTL	No (max < IDTL)	0

Table 2-5
Human Health Assessment Soil Screening Results
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Analyte	Number of Valid Samples	Number of Detects	Maximum Detected Concentration (mg/kg)	Screening Value ^c (mg/kg)	Screening Value Source	COC	Frequency of Exceedance
Semivolatile Organic Compounds							
2-Chloronaphthalene	15	1	0.17	128	IDTL	No (max < IDTL)	0
2-Methylphenol ^c	37	1	0.005	1.8	IDTL	No (max < IDTL)	0
3 & 4 Methylphenol	37	1	0.066	0.14	IDTL	No (max < IDTL)	0
4-Nitroaniline	15	1	0.0054 J	0.0030	IDTL	YES	1
Bis(2-chloroethoxy)methane	15	1	0.077	na	IDTL	--	--
Bis(2-ethylhexyl)phthalate	39	4	0.3	12	IDTL	No (max < IDTL)	0
Butyl benzyl phthalate	39	1	0.014	511	IDTL	No (max < IDTL)	0
Carbazole	39	4	0.95	na	IDTL	--	--
Dibenzofuran	39	4	0.56	6.1	IDTL	No (max < IDTL)	0
Diethylphthalate	39	4	0.2	28	IDTL	No (max < IDTL)	0
Di-n-butyl phthalate	39	3	0.2	31	IDTL	No (max < IDTL)	0
Di-n-octyl phthalate	39	1	0.054	1,829	IDTL	No (max < IDTL)	0
Phenol	37	1	0.0095	7.4	IDTL	No (max < IDTL)	0
Metals							
Aluminum ^b	38	38	19500	77,000	RSL	No (max < RSL)	0
Antimony	38	36	13	4.8	IDTL	YES	1
Arsenic	38	38	45	0.39	IDTL	YES	38
Barium	38	38	1100	896	IDTL	YES	1
Beryllium	38	35	10	1.6	IDTL	YES	1
Cadmium	38	33	0.94	1.4	IDTL	No (max < IDTL)	0
Calcium	38	38	25000	na	IDTL	No, ES	--
Chromium ^d	38	38	18.8	2,135	IDTL	No (max < IDTL)	0
Cobalt	38	38	19.2	23	IDTL	No (max < IDTL)	0
Copper	38	38	160	921	IDTL	No (max < IDTL)	0
Iron	38	38	24,600	5.8	IDTL	YES	38
Lead	38	38	410	50	IDTL	YES	8
Magnesium	38	38	9600	na	IDTL	No, ES	--
Manganese	38	38	560	223	IDTL	YES	22
Mercury	38	27	0.117	0.0051	IDTL	YES	27
Nickel	38	38	32.3	59	IDTL	No (max < IDTL)	0
Potassium	38	38	3500	na	IDTL	No, ES	--
Selenium	38	38	0.4	2.0	IDTL	No (max < IDTL)	0
Silver	38	14	0.17	0.19	IDTL	No (max < IDTL)	0
Sodium	38	4	477	na	IDTL	No, ES	--
Thallium	38	15	0.41	1.6	IDTL	No (max < IDTL)	0
Vanadium ^b	38	38	37	390	RSL	No (max < IDTL)	0
Zinc	38	38	180	886	IDTL	No (max < IDTL)	0

Notes: ^a Value for total xylenes

^b IDEQ value was not available, EPA Regional Screening Level was used (EPA 2010)

^c Value is for 4-methylphenol

^d Value for Chromium (III) Total

^e These values are IDTL criteria unless noted.

^f Methylene chloride is a common laboratory contaminant, so it is not designated as a site COC.

Key:

COC = Chemical of concern; maximum detected value is greater than the screening value (max < IDTL)

na = A screening value for this analyte was not available

ES = Essential nutrient, not evaluated in this risk evaluation.

IDTL = Idaho Department of Environmental Quality, Idaho Default Target Levels (DEQ 2004)

J = estimated value

mg/kg = milligram per kilogram

RSL = Regional Screening Level

Table 2-6
Comparison of Maximum Site Metals Concentrations to Background
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Analyte	Maximum Detected Concentration (mg/kg)	Upper Bound Background^a (mg/kg)	Frequency of Exceedence Compared to Background
Antimony	13	5.8	11
Arsenic	45	22	3
Iron	24,600	65,000	0
Lead	410	171	1
Manganese	560	3,597	0
Mercury	0.117	0.3	0

Note: ^a Background levels obtained from URS Greiner, 2001.

Key:
mg/kg = milligrams per kilogram

Table 2-7
Human Health Assessment Groundwater Screening Results
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Analyte	Number of Valid Samples	Number of Detects	Maximum Detected Concentration (µg/L)	Screening Value ^c (µg/L)	Screening Value Source	COC	Frequency of Exceedance
Volatile Organic Compounds							
Acetone	9	3	3.2 J	9386	IDTL	No (max < IDTL)	0
Chlorobenzene	9	2	3.6	100	IDTL	No (max < IDTL)	0
1,2-Dichlorobenzene	9	4	0.53 J	600	IDTL	No (max < IDTL)	0
1,4-Dichlorobenzene	9	1	0.051 J	75	IDTL	No (max < IDTL)	0
Polychlorinated Biphenyls (PCBs)							
Aroclor 1260	13	1	0.028	0.028	IDTL	YES	1
Bulk Petroleum Parameters							
Diesel Range Organics	21	14	110,000	none	na	No (no standard)	na
Heavy Oils	21	10	45,000	none	na	No (no standard)	na
Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs)							
Benzo(a)anthracene	21	6	1.6	0.077	IDTL	YES	2
Benzo(a)pyrene	21	2	0.85	0.20	IDTL	YES	1
Benzo(b)fluoranthene	21	3	0.84	0.077	IDTL	YES	2
Benzo(k)fluoranthene	21	1	0.021 J	0.77	IDTL	No (max < IDTL)	0
Chrysene	21	9	3	7.7	IDTL	No (max < IDTL)	0
Non-Carcinogenic PAHs							
1-Methylnaphthalene ^a	21	12	210	2.3	RSL	YES	5
2-Methylnaphthalene	21	12	270	42	IDTL	YES	1
Acenaphthene	21	17	9.3	626	IDTL	No (max < IDTL)	0
Acenaphthylene	21	9	0.25	626	IDTL	No (max < IDTL)	0
Anthracene	21	16	4.4	3129	IDTL	No (max < IDTL)	0
Benzo(g,h,i)perylene	21	4	0.51	313	IDTL	No (max < IDTL)	0
Fluoranthene	21	12	4.2	417	IDTL	No (max < IDTL)	0
Fluorene	21	18	34	417	IDTL	No (max < IDTL)	0
Naphthalene	21	14	63	209	IDTL	No (max < IDTL)	0
Phenanthrene	21	15	59	313	IDTL	No (max < IDTL)	0
Pyrene	21	12	8.6	313	IDTL	No (max < IDTL)	0
Semivolatile Organic Compounds							
Bis(2-chloroethyl)ether	9	1	0.028	0.051	IDTL	No (max < IDTL)	0
Bis(2-ethylhexyl)phthalate	9	6	390	6.0	IDTL	No ^d	6
Carbazole	9	3	0.48	na	IDTL	--	0
Dibenzofuran	9	1	0.02	42	IDTL	No (max < IDTL)	0
Diethylphthalate	9	2	0.018	8343	IDTL	No (max < IDTL)	0
Di-n-butyl phthalate	9	1	2.5	1043	IDTL	No (max < IDTL)	0
Di-n-octyl phthalate	9	1	0.08	417	IDTL	No (max < IDTL)	0
4,6-Dinitro-2-methylphenol ^f	5	1	19 J	2.9	RSL	YES	1
N-Nitrosodiphenylamine	9	1	12	11	IDTL	YES	1

Table 2-7
Human Health Assessment Groundwater Screening Results
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Analyte	Number of Valid Samples	Number of Detects	Maximum Detected Concentration (µg/L)	Screening Value ^c (µg/L)	Screening Value Source	COC	Frequency of Exceedance
Metals							
Aluminum	21	8	32,200	37000	IDTL	No (max < IDTL)	0
Arsenic	21	16	88.6	10	IDTL	YES	10
Antimony	12	9	2.8	6.0	IDTL	No (max < IDTL)	0
Barium	21	21	305	2000	IDTL	No (max < IDTL)	0
Beryllium	21	2	1.84	4.0	IDTL	No (max < IDTL)	0
Cadmium	21	2	1.07	5.0	IDTL	No (max < IDTL)	0
Calcium	21	21	82,300	na	IDTL	--	0
Chromium ^b	21	8	35.6	100	IDTL	No (max < IDTL)	0
Cobalt^a	21	18	22.9	11	RSL	YES	2
Copper	21	18	132	1300	IDTL	No (max < IDTL)	0
Iron	21	20	80,500	3,130	IDTL	YES	13
Lead	21	9	39.8	15	IDTL	YES	1
Magnesium	21	21	26400	na	IDTL	--	0
Manganese	21	21	5630	250	IDTL	YES	13
Nickel	21	21	37.8	209	IDTL	No (max < IDTL)	0
Potassium	21	21	8130	na	IDTL	--	0
Selenium	21	2	1.18	50	IDTL	No (max < IDTL)	0
Silver	21	1	0.532	52	IDTL	No (max < IDTL)	0
Sodium	21	20	5350	na	IDTL	--	0
Thallium	21	1	0.356	2.0	IDTL	No (max < IDTL)	0
Vanadium ^a	21	10	53.2	180	RSL	No (max < IDTL)	0
Zinc	21	14	1200	3,130	IDTL	No (max < IDTL)	0
Mercury	21	5	0.12	2.0	IDTL	No (max < IDTL)	0

Notes: ^a IDEQ value was not available, EPA Regional Screening Level was used (EPA 2010)

^b Value for Chromium (III) Total

^c These values are IDTL criteria unless noted.

^d Bis(2-ethylhexyl)phthalate is a component of plastic well casing and is also a common laboratory contaminant. Therefore it is not considered a site COC.

Key:

COC = Chemical of concern; maximum detected value is greater than screening value (max < IDTL)

ES = Essential nutrient, not evaluated in this risk evaluation

IDTL = Idaho Department of Environmental Quality, Idaho Default Target Levels (DEQ 2004)

µg/L = microgram per kilogram

na = A screening value for this analyte was not available

Table 2-8
Human Health Assessment Surface Water and Aquatic Organisms Screening Results
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Analyte	Number of Valid Samples	Number of Detects	Maximum Detected Conc. (µg/L)	Surface Water Supply (µg/L)	FOE Surface Water Supply	Surface Water Recreational Use (µg/L)	FoE Surface Water Recreational Use	COC
Bulk Petroleum Parameters								
Diesel-Range Organics	11	2	2,300	na	--	na	--	--
Oil-Range Organics	11	1	1,200	na	--	na	--	--
Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs)								
Benzo(a)anthracene	11	2	0.011 J	0.0038	2	0.018	0	YES
Benzo[a]pyrene	11	1	0.027	0.0038	1	0.018	1	YES
Benzo[b]fluoranthene	11	1	0.023 J	0.0038	1	0.018	1	YES
Chrysene	11	2	0.016 J	0.0038	2	0.018	0	YES
Non-Carcinogenic PAHs								
1-Methylnaphthalene	11	7	0.34	na	--	na	--	--
2-Methylnaphthalene	11	3	0.11	na	--	na	--	--
Acenaphthene	11	7	0.084	670	0	990	0	No (max < SL)
Acenaphthylene	11	3	0.0094 J	na	--	na	--	--
Anthracene	11	7	0.021	8,300	0	40,000	0	No (max < SL)
Fluoranthene	11	7	0.017	300	0	140	0	No (max < SL)
Fluorene	11	7	0.2	1,100	0	5,300	0	No (max < SL)
Naphthalene	11	2	0.054	na	--	na	--	--
Phenanthrene	11	7	0.21	na	--	na	--	--
Pyrene	11	6	0.046	830	0	4,000	0	No (max < SL)
Semivolatile Organic Compounds								
Diethyl phthalate	3	1	0.011 J	23,000	0	120,000	0	No (max < SL)
Di-n-octyl phthalate	3	1	0.073 J	na	--	na	--	--
Benzyl alcohol	3	1	0.013 J	na	--	na	--	--
Metals								
Arsenic ^a	11	5	1.1 J	10	0	10	0	No (max < SL)
Barium	11	11	13	na	--	na	--	--
Chromium ^b	11	5	0.51 J	na	--	na	--	--
Cobalt	11	2	0.033 J	na	--	na	--	--
Copper	11	8	0.9 J	na	--	na	--	--
Manganese	11	8	160	na	--	na	--	--
Mercury ^a	11	2	0.12 J	0.14	0	0.15	0	No (max < SL)
Nickel ^a	11	8	0.58 J	610	0	4,600	0	No (max < SL)
Thallium	11	1	0.14 J	0.24	0	0.47	0	No (max < SL)
Vanadium	11	1	0.28 J	na	--	na	--	--

Notes: ^a Surface water value is for dissolved metals

^b Value for Chromium (III) Total

Key:

COC = Chemical of concern; maximum detected value is greater than screening value (max < IDTL)

Conc. = concentration

FoE = frequency of exceedence

IDTL = Idaho Department of Environmental Quality, Idaho Default Target Levels (DEQ 2004)

na = A screening value for this analyte was not available

µg/L = micrograms per kilogram

SL = screening level

Table 2-9 Ecological Assessment Surface Water Screening Results Draft Engineering Evaluation/Cost Analysis Avery Landing Site, Avery, Idaho							
Chemical	Number of Samples	Number of Detects	Maximum Detected Concentration (µg/L)	Idaho Chronic Water Quality Standard (µg/L)	Alternate Surface Water Benchmark ^b		Frequency of Exceedance (FoE)
					Value (µg/L)	Description	
Bulk Petroleum Parameters							
Diesel-Range Organics	11	2	2,300	na	na	na	--
Oil-Range Organics	11	1	1,200	na	na	na	--
Polycyclic Aromatic Hydrocarbons (PAHs)							
1-Methylnaphthalene	11	7	0.34	na	2.1	Tier II SCV	0
2-Methylnaphthalene	11	3	0.11	na	2.1	Tier II SCV	0
Acenaphthene	11	7	0.084	na	74	LCV	0
Acenaphthylene	8	3	0.0094 J	na	na	na	--
Anthracene	11	7	0.021	na	0.73	Tier II SCV	0
Benzo(a)anthracene	11	2	0.011 J	na	0.027	Tier II SCV	0
Benzo[a]pyrene	11	1	0.027	na	0.014	Tier II SCV	1
Benzo[b]fluoranthene	11	1	0.023 J	na	na	na	--
Chrysene	11	2	0.016 J	na	na	na	--
Fluoranthene	11	7	0.017	na	15	LCV	0
Fluorene	11	7	0.2	na	3.9	Tier II SCV	0
Naphthalene	11	2	0.054	na	12	Tier II SCV	0
Phenanthrene	11	7	0.21	na	200	LCV	0
Pyrene	11	6	0.046	na	na	na	--
Semivolatile Organic Compounds							
Diethyl phthalate	3	1	0.011 J	na	210	Tier II SCV	0
Di-n-octyl phthalate	3	1	0.073 J	na	780	LCV	0
Benzyl alcohol	3	1	0.013 J	na	8.6	Tier II SCV	0
Metals							
Arsenic	11	5	1.1 J	150	nr	nr	0
Barium	11	11	13	na	nr	nr	--
Chromium ^a	11	5	0.51 J	42	nr	nr	0
Cobalt	11	2	0.033 J	na	23	Tier II SCV	0
Copper ^a	11	8	0.9 J	6.3	nr	nr	0
Manganese	11	8	160	na	120	Tier II SCV	1
Mercury	11	2	0.12 J	na	1.3	Tier II SCV	0
Nickel ^a	11	8	0.58 J	49	nr	nr	0
Thallium	11	1	0.14 J	na	12	Tier II SCV	0
Vanadium	11	1	0.28 J	na	20	Tier II SCV	0

Notes: a = Based on hardness of 50 mg/L as calcium carbonate.

b = Suter and Tsao (1996).

Key:

FoE = frequency of exceedance

LCV = lowest chronic value

na = not available

nr = not required (given that a state standard is available)

SCV = secondary chronic value

Table 2-10 Ecological Assessment Sediment Screening Results Draft Engineering Evaluation/Cost Analysis Avery Landing Site, Avery, Idaho							
Analyte	Number of Samples	Number of Detects	Maximum Detected Concentration (mg/kg)	RSET (2006) Freshwater Sediment Benchmark (mg/kg)		Alternate Screening Level ^a (mg/kg)	Frequency of Exceedance (FoE)
				SL1	SL2		
Polychlorinated Biphenyls (PCBs)							
Aroclor 1260	16	1	0.01	0.06	0.12	nr	0
Bulk Petroleum Parameters							
Diesel Range Organics	16	11	8,830	na	na	na	--
Heavy Oils	16	12	6,980	na	na	na	--
Polycyclic Aromatic Hydrocarbons (PAHs)							
1-Methylnaphthalene	16	3	5	na	na	na	--
2-Methylnaphthalene	16	14	0.47	0.47	0.56	nr	0
Acenaphthene	16	3	1.9	1.1	1.3	nr	1
Acenaphthylene	16	4	0.0046	0.47	0.64	nr	0
Anthracene	16	3	0.23	1.2	1.6	nr	0
Benzo(a)anthracene	12	7	0.48	4.3	5.8	nr	0
Benzo(a)pyrene	13	8	0.097	3.3	4.8	nr	0
Benzo(b)fluoranthene	12	9	0.143	0.6	4	nr	0
Benzo(g,h,i)perylene	15	11	0.12	4	5.2	nr	0
Benzo(k)fluoranthene	11	7	0.0467	0.6	4	nr	0
Chrysene	15	8	1	5.9	6.4	nr	0
Dibenzo(a,h)anthracene	15	9	0.037	0.8	0.84	nr	0
Fluoranthene	16	7	0.68	11	15	nr	0
Fluorene	16	3	3.1	1	3	nr	1
Indeno(1,2,3-cd)pyrene	14	9	0.0746	4.1	5.3	nr	0
Naphthalene	16	1	0.019	0.5	1.3	nr	0
Phenanthrene	16	4	5	6.1	7.6	nr	0
Pyrene	15	11	2.3	8.8	16	nr	0
Other Organic Chemicals							
1,1,2,2,-Tetrachloroethane	16	2	0.00027	na	na	1.6	0
1,2,4-Trichlorobenzene	16	1	0.00088	na	na	9.2	0
1,2,4-Trimethylbenzene	16	2	0.00077	na	na	na	--
1,2-Dibromo-3-Chloropropane	16	2	0.00054	na	na	na	--
1,2-Dichlororbenzene	16	5	0.0023	na	na	0.34	0
1,3,5-Trimethylbenzene	16	2	0.0006	na	na	na	--
1,3-Dichlorobenzene	16	2	0.00054	na	na	1.7	0
1,4-Dichlorobenzene	16	2	0.00094	na	na	0.35	0
2,6-Dinitrotoluene	16	1	0.0031	na	na	na	--
2-Chloronaphthalene	16	2	0.0037	na	na	na	--
2-Chlorotoluene	16	2	0.00035	na	na	na	--
3 & 4 Methylphenol	16	4	0.0071	na	na	na	--
4-Chlorotoluene	16	1	0.00046	na	na	na	--
4-Isopropyltoluene	16	10	0.0072	na	na	na	--
Benzene	16	1	0.0013	na	na	0.057	0
Benzoic acid	16	3	0.12	na	na	na	--
Benzyl alcohol	16	1	0.0017	na	na	na	--
Bis(2-ethylhexyl)phthalate	16	4	0.01	0.22	0.32	nr	0
Bromobenzene	16	2	0.00035	na	na	na	--
Carbazole	16	5	0.0024	na	na	0.14	0
Chlorobenzene	16	2	0.003	na	na	0.035	0
Chloromethane	16	2	0.0032	na	na	na	--
Dibenzofuran	16	5	0.015	na	na	2.4	0
Di-n-octyl phthalate	16	2	0.0039	0.026	0.045	nr	0

<p align="center">Table 2-10 Ecological Assessment Sediment Screening Results Draft Engineering Evaluation/Cost Analysis Avery Landing Site, Avery, Idaho</p>							
Analyte	Number of Samples	Number of Detects	Maximum Detected Concentration (mg/kg)	RSET (2006) Freshwater Sediment Benchmark (mg/kg)		Alternate Screening Level ^a (mg/kg)	Frequency of Exceedance (FoE)
				SL1	SL2		
Ethylbenzene	16	2	0.00035	na	na	1.4	0
Hexachlorobutadiene	16	3	0.0011	na	na	0.054	0
Isophorone	16	1	0.022	na	na	2.4	0
Isopropylbenzene	16	5	0.0028	na	na	na	--
m-Xylene & p-Xylene	16	5	0.00065	na	na	0.025	0
n-Butylbenzene	16	5	0.018	na	na	na	--
N-Propylbenzene	16	5	0.00088	na	na	na	--
o-Xylene	16	6	0.00097	na	na	0.025	0
Phenol	16	4	0.0055	na	na	0.048	0
sec-Butylbenzene	16	5	0.01	na	na	na	--
Styrene	16	2	0.00051	na	na	na	--
tert-Butylbenzene	16	3	0.00089	na	na	na	--
Toluene	16	3	0.0022	na	na	0.89	0
Metals							
Aluminum	16	16	7,000	na	na	58,000	0
Antimony	16	16	210	na	na	3	5
Arsenic	16	16	28	20	51	nr	1
Barium	16	16	49	na	na	na	--
Beryllium	16	16	0.31	na	na	na	--
Chromium	16	16	8.2	95	100	nr	0
Cobalt	16	16	8.4	na	na	50	0
Copper	16	16	58	80	830	nr	0
Iron	16	16	16,000	na	na	190,000	0
Lead	16	16	600	340	430	nr	1
Manganese	16	16	420	na	na	460	0
Mercury	16	8	0.061	0.28	0.75	nr	0
Nickel	16	16	13	60	70	nr	0
Silver	16	1	0.053	2	2.5	nr	0
Vanadium	16	16	18	na	na	na	--
Zinc	16	16	70	130	400	nr	0

Notes: ^a MacDonald et al. (1999).

Key:

na = not available

nr = not required (given that a RSET benchmark is available)

RSET = Regional Sediment Evaluation Team

SL1 = screening level 1

SL2 = screening level 2

<p align="center"> Table 2-11 Screening Summary for All Media Draft Engineering Evaluation/Cost Analysis Avery Landing Site, Avery, Idaho </p>

Contaminant of Concern	Media ^a														
	Soil (Human Health)			Groundwater (Human Health)			Surface Water (Human Health)			Surface Water (Ecological Receptors)			Sediment (Ecological Receptors)		
	FoE	Max. Conc. (mg/kg)	Screening Value (mg/kg)	FoE	Max. Conc. (µg/L)	Screening Value (µg/L)	FoE	Max. Conc. (µg/L)	Screening Value (µg/L)	FoE	Max. Conc. (µg/L)	Screening Value (µg/L)	FoE	Max. Conc. (mg/kg)	Screening Value (mg/kg)
Volatile Organic Compounds															
1,2,4-Trimethylbenzene	3	53	0.19												
1,3,5-Trimethylbenzene	2	13	0.15												
Benzene	3	0.045 J	0.018												
m-Xylene & p-Xylene	1	9	1.7												
o-Xylene	1	5.5	1.7												
sec-Butylbenzene	1	4.5	1.2												
Trichloroethene	3	0.17	0.0029												
Polychlorinated Biphenyls (PCBs)															
Aroclor 1260				1	0.028	0.028									
Bulk Petroleum Parameters															
Diesel Range Organics															
Heavy Oils															
Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs)															
Benzo(a)anthracene	1	0.86	0.42	2	1.6	0.077	2	0.011 J	0.0038						
Benzo(a)pyrene	11	0.65	0.042	1	0.85	0.20	1	0.027	0.0038	1	0.027	0.014			
Benzo(b)fluoranthene	1	0.49	0.42	2	0.84	0.077	1	0.023 J	0.0038						
Chrysene							2	0.016 J	0.0038						
Dibenzo(a,h)anthracene	1	0.245	0.042												
Non-Carcinogenic PAHs															
Acenaphthene													1	1.9	1.1
1-Methylnaphthalene	1	30	22	5	210	2.3									
2-Methylnaphthalene	8	44	3.3	1	270	42									
Fluorene													1	3.1	1
Naphthalene	7	6.0 J	1.1												
Semivolatile Organic Compounds															
4-Nitroaniline	1	0.0054	0.00299												
4,6-Dinitro-2-Methylphenol				1	19 J	2.9									
N-Nitrosodiphenylamine				1	12	11.4									

Table 2-11
Screening Summary for All Media
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

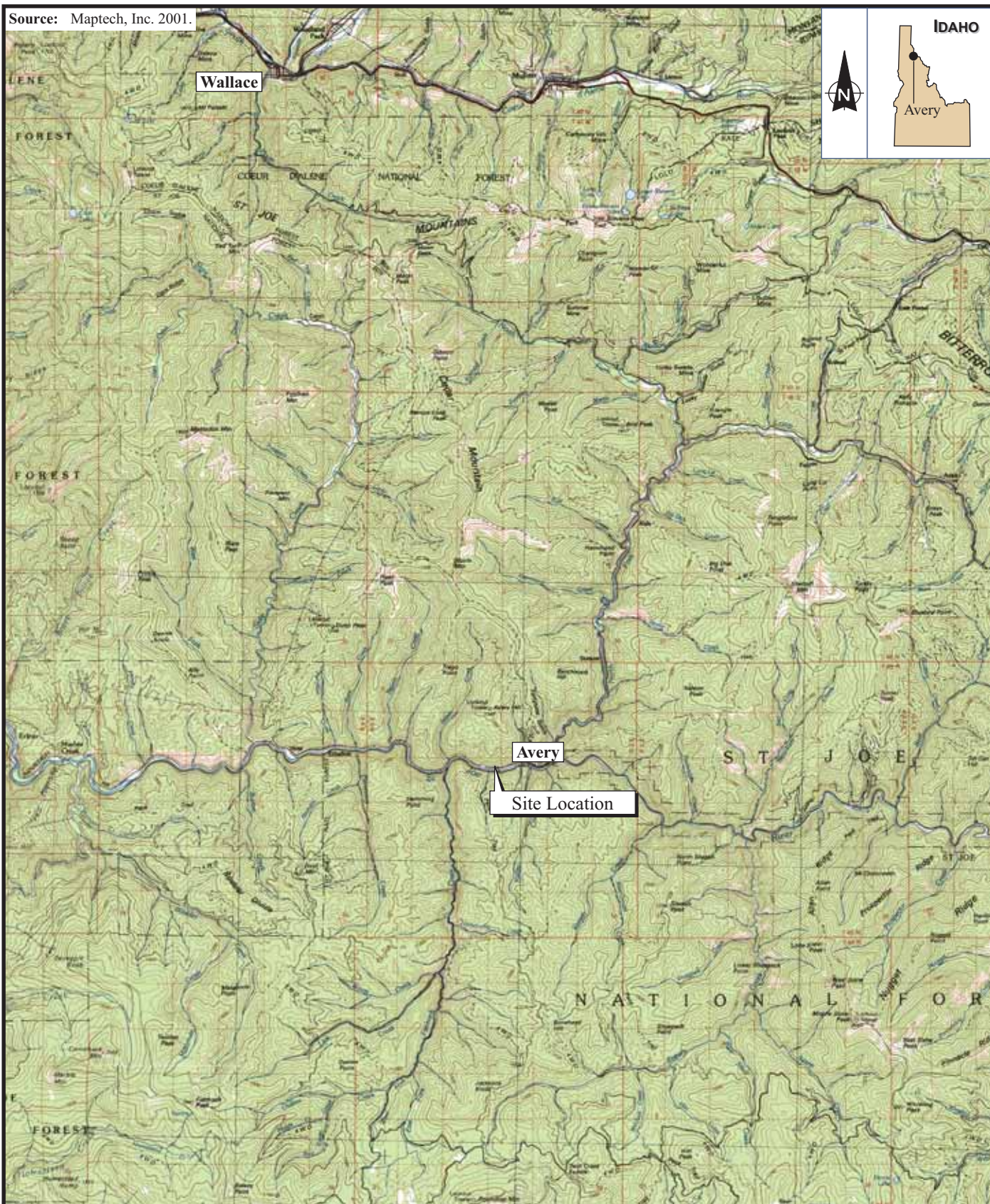
Contaminant of Concern	Media ^a														
	Soil (Human Health)			Groundwater (Human Health)			Surface Water (Human Health)			Surface Water (Ecological Receptors)			Sediment (Ecological Receptors)		
	FoE	Max. Conc. (mg/kg)	Screening Value (mg/kg)	FoE	Max. Conc. (µg/L)	Screening Value (µg/L)	FoE	Max. Conc. (µg/L)	Screening Value (µg/L)	FoE	Max. Conc. (µg/L)	Screening Value (µg/L)	FoE	Max. Conc. (mg/kg)	Screening Value (mg/kg)
Metals															
Antimony	1	13	4.8										5	210	3
Arsenic	38	45	0.39	10	88.6	10							1	28	20
Barium	1	1100	896												
Beryllium	1	10	1.6												
Cobalt				2	22.9	11									
Iron	38	24,600	5.8	13	80,500	3,130									
Lead	8	410	50	1	39.8	15							1	600	340
Manganese	22	560	223	13	5,630	250				1	160	120			
Mercury	27	0.117	0.0051												


Note: ^a Soil, groundwater, and surface water were screening using human health criteria. Surface water and sediments were screening using ecological criteria (see Conceptual Site Model, Figure 2-18)

Key:

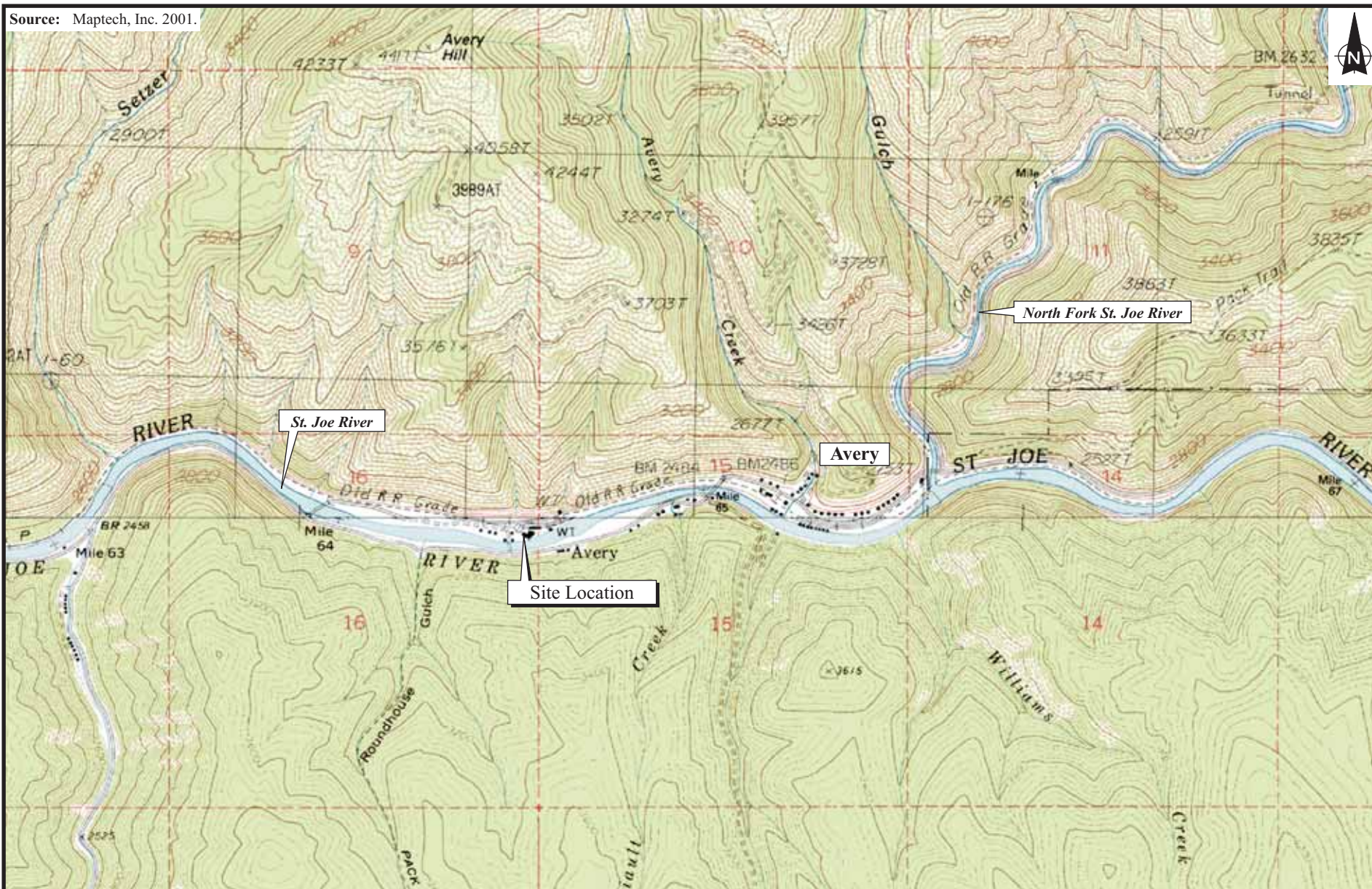
COC = chemical of concern
FoE = frequency of exceedence
mg/kg = milligrams per kilogram
mg/L = micrograms per liter
J = estimated value

Source: Maptech, Inc. 2001.



 <p>ecology and environment, inc. International Specialists in the Environment Seattle, Washington</p>	<p>AVERY LANDING SITE Avery, Idaho</p>		<p>Figure 2-1 SITE LOCATION MAP</p>	
	<p>0 1.5 3 Approximate Scale in Miles</p>	<p>Date: 11-12-10</p>	<p>Drawn by: AES</p>	<p>10:START-3\08050006\fig 2-1</p>

Source: Maptech, Inc. 2001.





Source: Golder 2010a.

LEGEND

Property Line & Section 16-15 Division Line

Site Boundary

<div><div><div></div></div><div>ecology and environment, inc.</div><div>International Specialists in the Environment Seattle, Washington</div></div>	<div><div><div>0140</div></div><div>APPROXIMATE SCALE IN FEET</div></div> <div><div></div><div>N</div></div>	<div>AVERY LANDING SITE Avery, Idaho</div>	Figure 2-3 SITE LAYOUT MAP		
			Date: 11/24/10	Drawn by: AES	10:START-3\08050006\fig 2-3

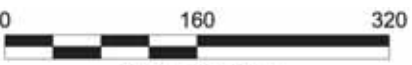


- LEGEND:**
- ===== HISTORICAL RAILROAD TRACKS
 - HISTORICAL FEATURES
 - HISTORICAL PIPING




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SCALE IN FEET



AVERY LANDING SITE
Avery, Idaho

Figure 2-5 HISTORICAL RAILROAD FACILITY LAYOUT WITH RECENT AERIAL IMAGE OF SITE		
Date: 11/12/10	Drawn by: AES	10:START-3\08050006\fig 2-5



Source: Golder 2010a.

* GROUNDWATER ELEVATION CALCULATED USING LNAPL
PRODUCT THICKNESS (POTENTIAL METRIC)

LEGEND:

- GROUNDWATER CONTOUR AND ELEVATION
(9/1/09) ABOVE MEAN SEA LEVEL
- GROUNDWATER FLOW ARROW
- MONITORING WELL
- SOIL BORING LOCATION
- PIEZOMETER



Source: Golder 2010a.

* GROUNDWATER ELEVATION CALCULATED USING LNAPL
PRODUCT THICKNESS (POTENTIAL METRIC)

LEGEND:

- GROUNDWATER CONTOUR AND ELEVATION
(11/19/09) ABOVE MEAN SEA LEVEL
- GROUNDWATER FLOW ARROW
- MONITORING WELL
- SOIL BORING LOCATION
- PIEZOMETER

Source: Farallon Consulting, March 2006.

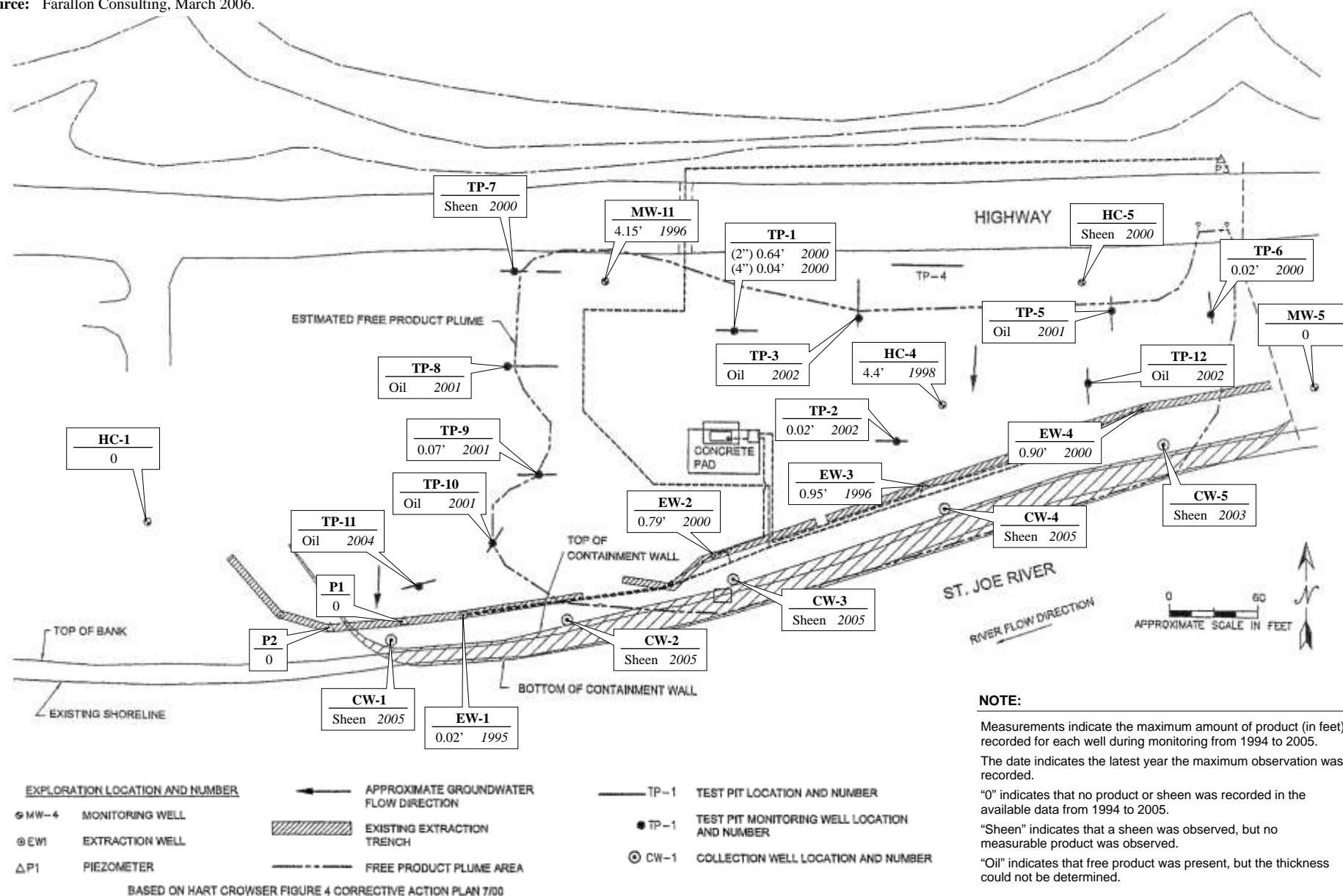


Figure 2-8
ESTIMATED FREE PRODUCT PLUME IN 2000 AND
HISTORIC MAXIMUM PRODUCT THICKNESSES

Date:
10/29/10

Drawn by:
AES

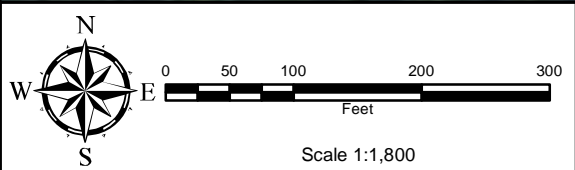
10:START-3\08050006\fig 2-8



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AVERY LANDING SITE
Avery, Idaho

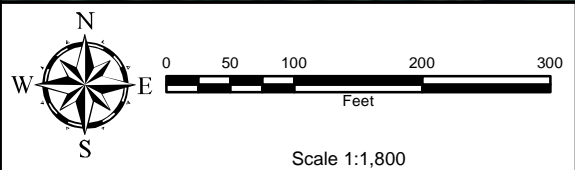
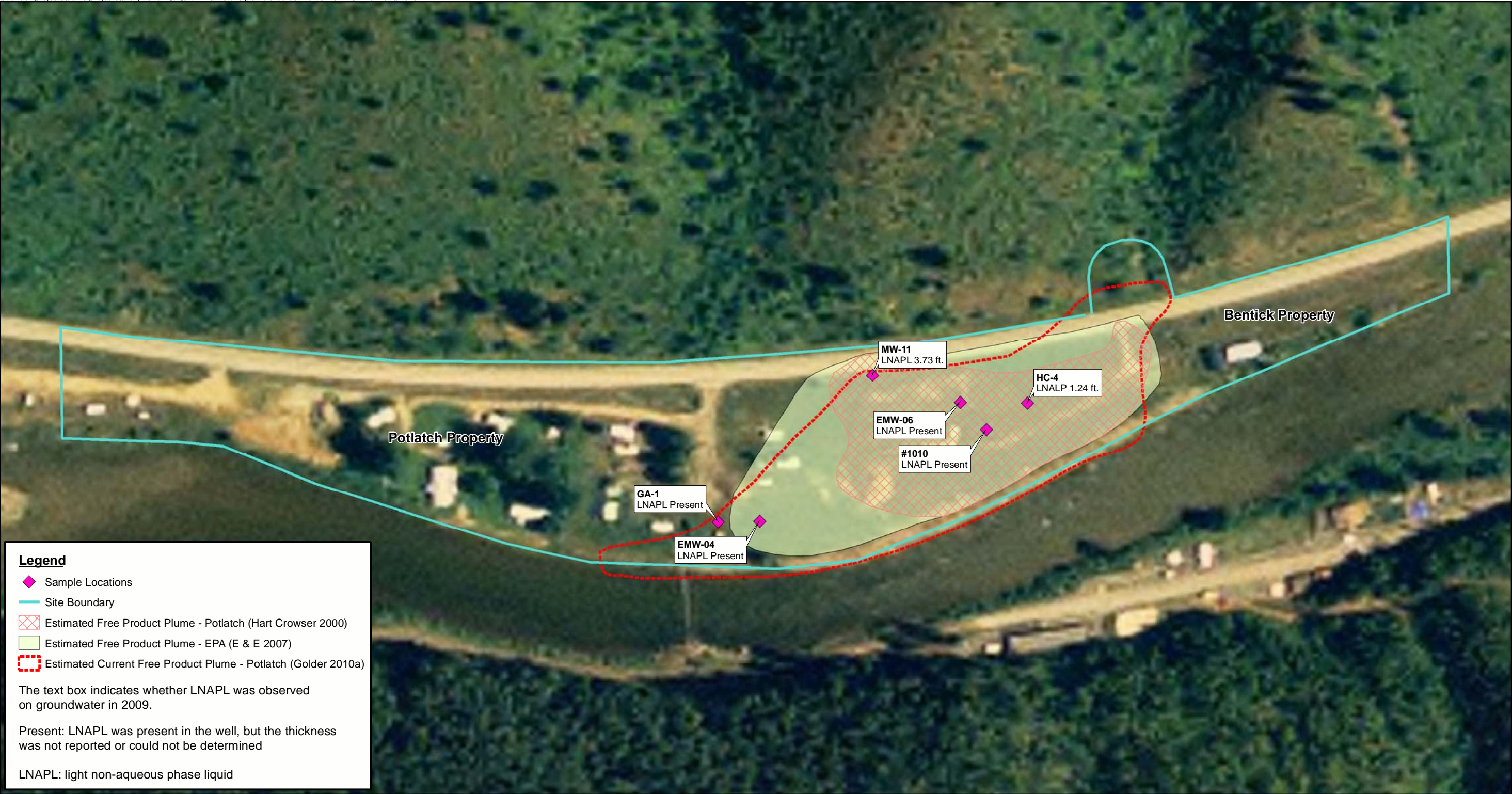
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AVERY LANDING SITE

Avery, Idaho

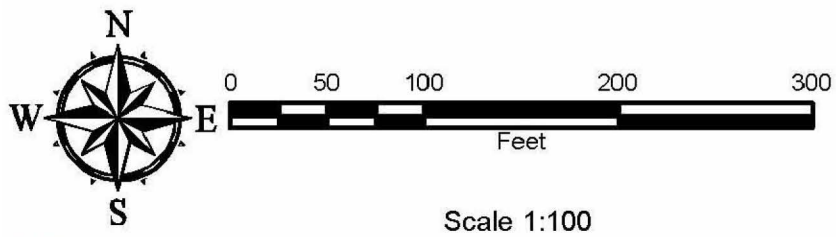
Figure 2-9	
LNAPL Plume Area Estimates (2000, 2007, and 2009) and Product Observations in Soil Borings and Test Pits (2007 and 2009).	
Map Source Information: Terraserver, USGS Aerial Photo	
Date: 7/22/2010	GIS Analyst: avh
Project ID: 002233.0193.01SF	

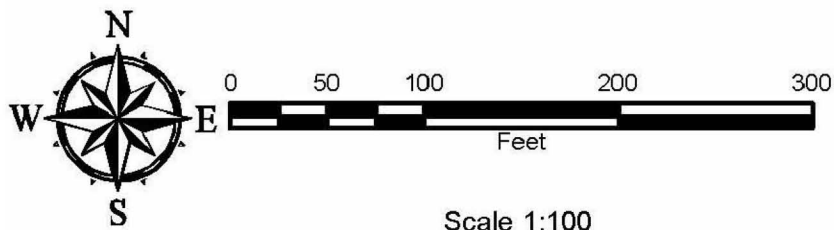


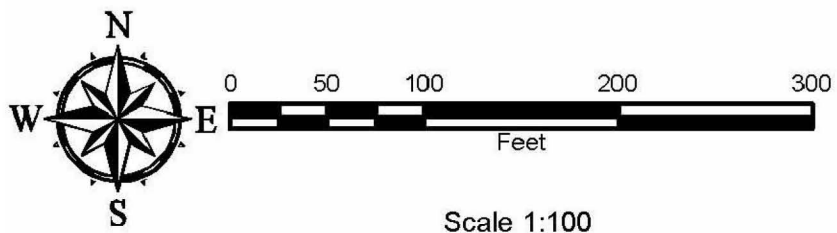
AVERY LANDING SITE

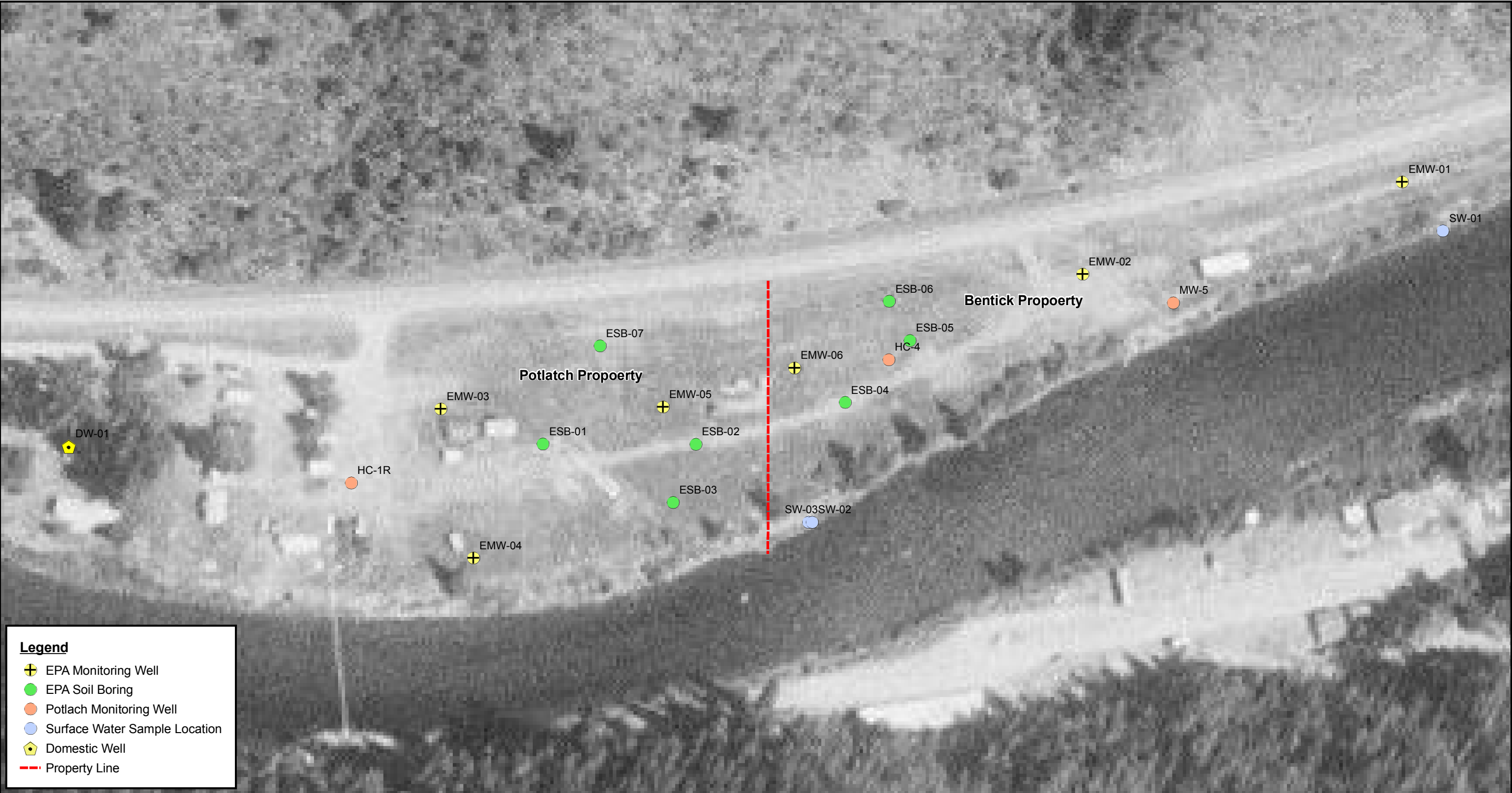
Avery, Idaho

Figure 2-10	
LNAPL Plume Area Estimates (2000, 2007, and 2009) and LNAPL Observations in Monitoring Wells (2009)	
Map Source Information: Microsoft Virtual Earth Aerial	
Date: 7/22/2010	GIS Analyst: avh
Project ID: 002233.0193.01SF	



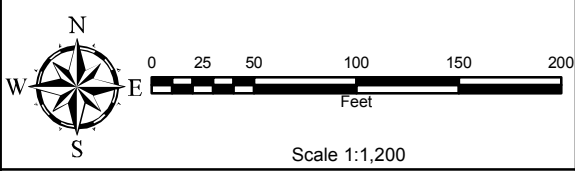






Legend

- ⊕ EPA Monitoring Well
- EPA Soil Boring
- Potlatch Monitoring Well
- Surface Water Sample Location
- ⬠ Domestic Well
- - - Property Line



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AVERY LANDING SITE

Avery, Idaho

Figure 2-14
Sample Locations from 2007
EPA Removal Assessment

Map Source Information:
Terraserver, USGS Aerial Photo

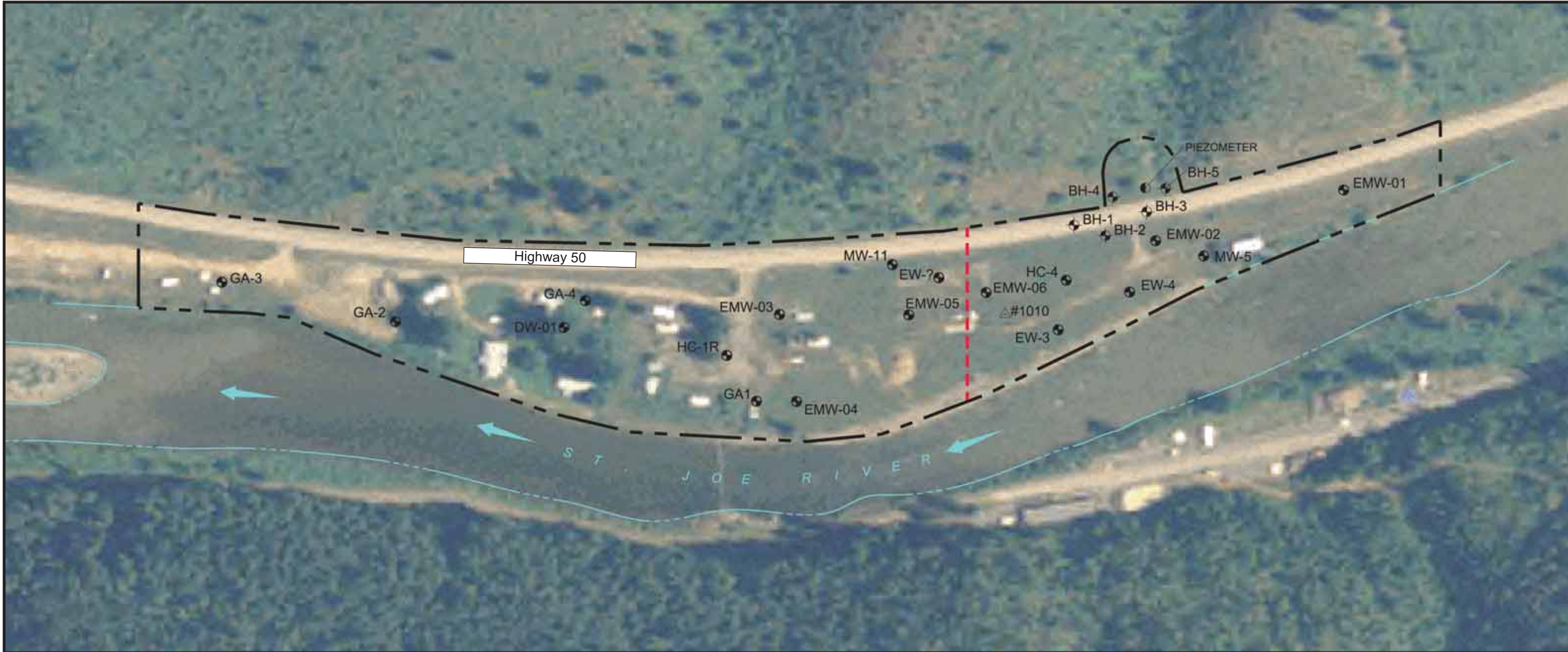
Date: 6/18/2007	GIS Analyst: avh
Project ID: 002233.0193.01SF	



Source: Golder 2010a.

LEGEND:

- — — — — SITE BOUNDARY
- — — — — EDGE OF WATER
- - - - - PROPERTY LINE AND SECTION 16-15 DIVISION LINE
- TEST PIT LOCATION
- TREATABILITY STUDY TEST PIT LOCATION



Source: Golder 2010a.

LEGEND:

SITE BOUNDARY

EDGE OF WATER

PROPERTY LINE AND SECTION 16-15 DIVISION LINE

MONITORING WELL

SOIL BORING LOCATION

PIEZOMETER

<div> <div> <div>ecology and environment, inc.</div> <div>International Specialists in the Environment</div> <div>Seattle, Washington</div> </div> </div>	<div> <div> <div>0</div> <div>160</div> <div>320</div> </div> <div>SCALE IN FEET</div> <div> </div> </div>	<div> <div>AVERY LANDING SITE</div> <div>Avery, Idaho</div> </div>	<div> <div>Figure 2-16</div> <div>MONITORING WELL AND SOIL BOREHOLE SAMPLE LOCATIONS</div> <div>FROM 2009 POTLATCH FIELDWORK</div> </div>		
			<div>Date:</div> <div>12/28/10</div>	<div>Drawn by:</div> <div>AES</div>	<div>10:START-3\08050006\fig 2-16</div>



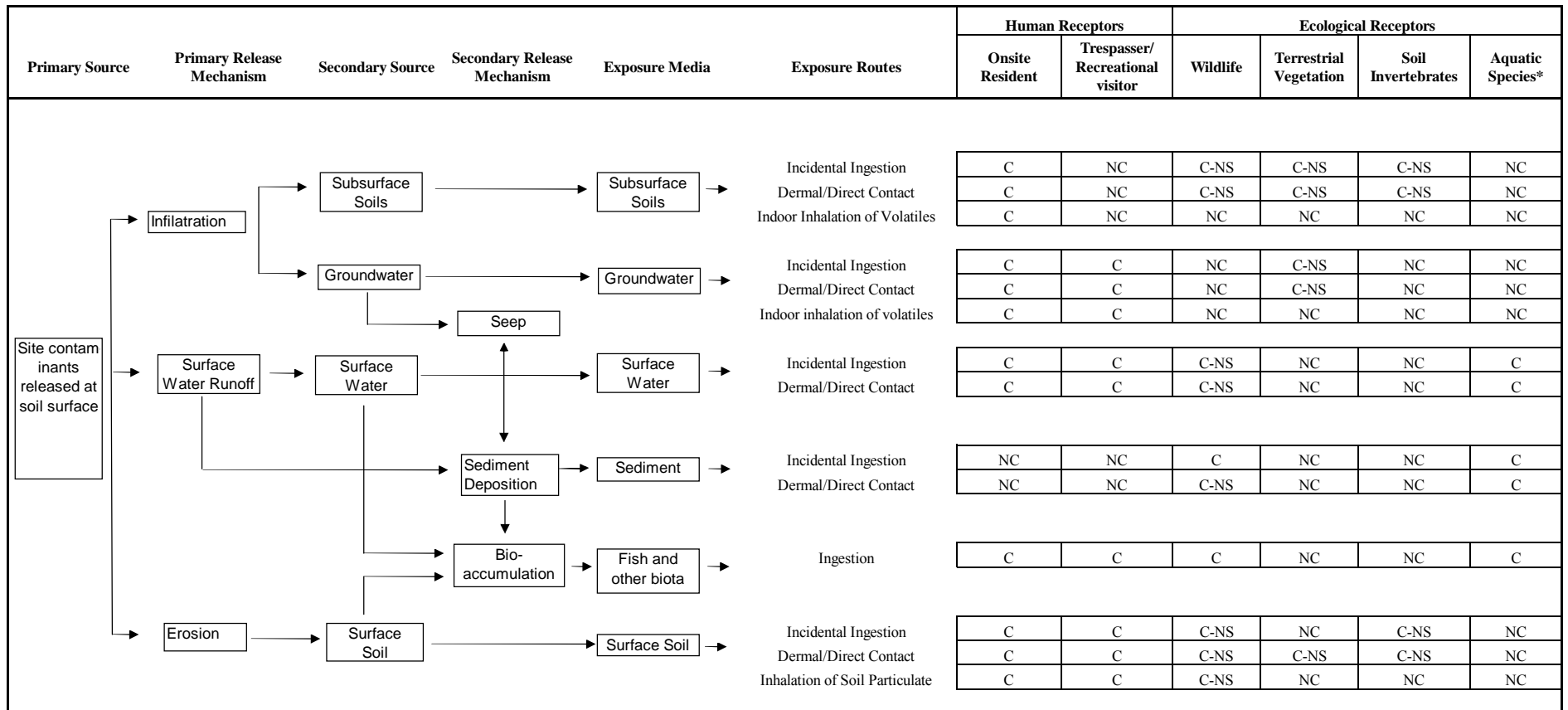
Source: Golder 2010a.

LEGEND:

	SITE BOUNDARY
	EDGE OF WATER
	PROPERTY LINE AND SECTION 16-15 DIVISION LINE
	SURFACE WATER AND SEDIMENT SAMPLE LOCATION

 ecology and environment, inc. International Specialists in the Environment Seattle, Washington	 SCALE IN FEET 	AVERY LANDING SITE Avery, Idaho	Figure 2-17 SEDIMENT AND SURFACE WATER STATION LOCATIONS FROM 2009 POTLATCH FIELD WORK		
			Date: 12/15/10	Drawn by: AES	10:START-3\08050006\fig 2-17

Figure 2-18
Conceptual Site Model for Human and Ecological Risk Evaluation
Avery Landing Site, Avery, Idaho



Key:
 NC = Not a complete exposure pathway
 C = Exposure pathway is complete or potentially complete
 C-NS = Exposure pathway may be complete but significant exposure is not likely to occur

3 Identification of Removal Action Objectives

This section presents the objectives for the proposed removal action. In addition, this section includes a description of the statutory limits on removal actions, the scope of the removal action, a description of compliance with potential applicable or relevant and appropriate requirements, and the general schedule for removal activities.

3.1 Statutory Considerations on Removal Actions

To the extent that a private entity undertakes the proposed CERCLA removal action, the CERCLA-related statutory limits discussed below for EPA-financed removal actions do not apply.

CERCLA Section 104(c)(1) set limits of \$2 million and 12 months for EPA-financed removal actions. Cost and implementation time exemptions may be granted if EPA determines that the removal action is necessary to mitigate an immediate risk to human health, welfare, or the environment or that the removal action is otherwise appropriate and consistent with anticipated long-term remedial action. EPA funds expended to conduct an EE/CA are CERCLA §104(b)(1) monies and are not counted toward the \$2 million statutory limit for removal actions.

To the extent that the removal action, or any portion thereof, is to be performed by EPA pursuant to the CWA, the funding for this work is administered by the United States Coast Guard.

3.2 Determination of Removal Scope and Objectives

3.2.1 Removal Action Scope

The scope of the proposed removal action is to prevent the discharge of petroleum product to the St. Joe River and to reduce hazardous substances to acceptable human health and ecological risk-based concentrations at the Site.

The scope corresponds to the following removal factors identified in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP):

- 40 C.F.R. § 300.415(b)(2)(i) which identifies “actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;” and
- 40 C.F.R. § 300.415(b)(2)(ii) which identifies “actual or potential contamination of drinking water supplies or sensitive ecosystems.”

3.2.2 Removal Action Objectives

Based on the scope of the removal action, the following removal action objectives have been developed for the Site:

- Remove the existing non-functioning groundwater containment, collection, and extraction system;
- Remove any petroleum product and hazardous substances from the St. Joe River bank;
- Reconstruct the St. Joe River bank;
- Remove, treat, and/or manage petroleum free product that is present as LNAPL on surface water or groundwater at greater than one-tenth (0.1) inch;
- Remove, treat, and/or manage soil and sediment contaminated by the petroleum free product and hazardous substances to prevent human and ecological exposures to risk-based concentrations by direct contact and incidental ingestion;
- Dispose of waste streams in accordance with CERCLA's Off-site Rule requirements.

These objectives will be achieved by meeting specified cleanup levels while working within the statutory limits and attaining potential applicable or relevant and appropriate requirements (ARARs) to the extent practicable.

3.3 Applicable or Relevant and Appropriate Requirements

Potential ARARs have been screened to aid in technology and alternative evaluation. For the removal action, on-Site actions are to comply with the substantive requirements of any identified ARARs, to the extent practicable considering the exigencies of the situation. On-Site actions do not have to comply with the corresponding procedural requirements such as permit applications, reporting, and recordkeeping. Off-Site actions are to comply with ARARs to the extent practicable considering the exigencies of the situation.

ARARs are divided into the following categories:

- **Chemical-specific requirements** are health- or risk-based concentration limits or ranges in various environmental media for specific hazardous substances, pollutants, or contaminants.
- **Action-specific requirements** are controls or restrictions on particular types of activities, such as hazardous waste management or wastewater treatment. Examples of action-specific requirements would be state and federal air emissions standards as applied to an in situ soil vapor extraction treatment unit.
- **Location-specific requirements** are restrictions on activities that are based on the characteristics of a Site or its immediate environment. An example would be restrictions on work performed in wetlands or wetland buffers.

Additionally, to-be-considered (TBC) materials are advisories, criteria, guidance or policy documents, and proposed standards that are not legally binding, but that may provide useful information or recommended procedures relevant to a cleanup action. The potential chemical-, location-, and action-specific ARARs and TBC materials for the EE/CA are summarized in Appendix E.

3.4 Determination of Removal Schedule

The general schedule for removal activities, including both the start and completion time for the non-time-critical removal action, will be subject to determinations to be made by EPA.

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4 Identification of Removal Action Alternatives

To achieve the RAOs established for the Avery Landing Site, a range of potential cleanup options and engineering controls were considered, including groundwater pump and treatment and bioremediation (i.e., land application). These alternatives were considered impracticable for the Site because of various engineering and technical reasons and thus were not included in the alternatives evaluated herein. Additionally, EPA considered an upgraded containment and LNAPL recovery system, similar to the systems previously installed and operated by Potlatch. However, given that these systems have not been successful at preventing petroleum discharges to the St. Joe River, this potential alternative was not included in the EE/CA.

Based on the Site-specific circumstances and RAOs, the following engineering and treatment technology alternatives were developed for the Site:

Alternative A1 – No Action

Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils

Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing

Alternative A4 – LNAPL Extraction and Off-Site Disposal

These alternatives are also summarized in Table 4-1.

A number of design assumptions must be made to fully develop and evaluate each alternative. These design assumptions are applicable to the technologies proposed in the individual alternatives. However, as additional information is obtained, the underlying assumptions may not necessarily be the same as those used as the basis for the final design and specifications.

4.1 Common Components of Alternatives

With the exception of Alternative A1 (No Action), each of the removal action alternatives listed above has common construction and/or required actions. In this subsection, these common components are identified and described. The common components are also listed in Table 4-2.

4.1.1 Excavation and LNAPL Removal

All of the alternatives except the no action alternative involve the physical removal of soil containing the COCs above the established cleanup objectives. For these alternatives, the following procedures would be implemented.

The clean overburden present above the zone of contamination would be excavated, stockpiled on Site, and subsequently used for backfill operations upon completion of excavation. Based on existing data, it is assumed that excavation would extend to a depth of approximately 2 feet below the seasonal low groundwater level, or to an average depth of 17 feet bgs. To minimize dewatering, soil below the water table would be removed during periods of low water levels

(summer and fall). Excavation of the contaminated soils will be initiated in the upgradient portion of the LNAPL plume area and completed in the downgradient portion to prevent recontamination of backfilled soils.

LNAPL encountered with the groundwater in the excavation would be pumped and treated via a large-scale, portable (i.e., trailer mounted) oil/water separator with carbon filter polishing. The oil/water separator would be operated to remove free product prior to completion of excavation work. Oil phase contaminants from the separator would be disposed of at an appropriate off-Site treatment and/or recycling center. The detailed design will further specify the method for dewatering and disposal of the captured product. Treated groundwater from LNAPL extraction activities would be discharged to the St. Joe River and/or allowed to passively infiltrate into the soil.

Prior to backfilling, confirmation soil samples would be collected to determine compliance with the cleanup objectives or whether additional soil removal would be necessary. Excavated areas would then be backfilled with stockpiled overburden and/or clean backfill and covered with approximately six inches of topsoil and stabilized once final grading were complete. The detailed design will specify areas for stockpiling, and outline the sampling frequency and analytes required to determine suitability for backfilling.

For purposes of this EE/CA, it is assumed that:

- The St. Joe River Road may undergo temporary lane closures to allow for excavation of the road and contaminated soils underneath, if required. The road would be reconstructed pursuant to federal and/or state requirements.
- Approximately 90,770 cubic yards of clean overburden soil will be excavated from the Site, stockpiled, and reused as backfill.
- Side slopes for excavations would be laid back at 1.5H:1V for stability. As a result of side slope excavation activities, an additional estimated 17,000 cubic yards of clean soil would be excavated, stockpiled, and reused as backfill.
- Soil in the removal area would be excavated down to 2 feet below the seasonal low groundwater table or to an average depth of 17 feet bgs.
- Approximately 47,000 cubic yards of contaminated soil would be excavated and treated. This volume was based on the cross sections of the plume area and the three discrete locations discussed in Section 2.4.2.

Removal options to address contaminated soil include ex situ thermal desorption, soil washing, and off-Site disposal. These treatment options are presented and developed in Alternatives A2, A3, and A4, respectively. A schematic diagram of the excavation/backfill design common to these three alternatives is shown in Figure 4-1.

4.1.2 Existing Treatment/Recovery System and Debris Removal

As part of all removal alternatives, except for the No Action alternative, the existing geomembrane barrier and collection trench, as well as debris from historical Site operations, would be removed and disposed of at an appropriate off-Site facility. This would allow for the excavation and cleanup of the St. Joe River bank.

4.1.3 Bank Reconstruction

As part of all removal alternatives, except for the No Action alternative, the shoreline would be excavated to address LNAPL contamination. Disposition of the removed materials would be as follows:

Clean Riprap: Based on field observations, the upper 12 vertical feet of the existing riprap is free of contamination. This clean riprap would be hauled to an on-Site area west of the removal area and stockpiled for later reuse.

Contaminated Riprap: For the purpose of the cost estimate, the lower 3 vertical feet of the existing riprap is assumed to be contaminated. This material would be hauled to a geomembrane-lined treatment area and steam cleaned and/or pressure washed to remove the contamination. It would then be stockpiled with the clean riprap for later reuse.

Foundations: Based on historical records, it is possible that reinforced concrete foundations from former railroad structures would be encountered during soil removal. These foundations would be broken into manageable-sized pieces. Reinforcing steel, if present, would be removed and salvaged where practicable. The larger concrete fragments would be cleaned, if necessary, and stockpiled with the riprap for future use. Smaller fragments would be used as backfill, if clean, or would be handled as contaminated soil.

Geosynthetics: Geomembrane and geotextile from previous cleanup activities would be removed and disposed of in a permitted off-Site facility. For purposes of this EE/CA, it is assumed that the nearest suitable disposal facility is the Waste Management Graham Road Landfill in Medical Lake, Washington, at a road distance of about 125 miles from the Site.

Non-Contaminated Soils: For alternatives that include treatment, excavated soil would be evaluated in the field to determine whether it contained LNAPL at levels exceeding Idaho standards (i.e., more than 0.1 inch on groundwater). Any soil containing visible LNAPL or exhibiting a sheen in groundwater will be treated. Excavated soil not requiring treatment would be stockpiled on Site for later use as backfill.

The slope of the new shoreline along the river would be protected from erosion by replacing the 5-foot-thick riprap layer (see Figure 4-1, Stage 4) with cleaned riprap and foundation fragments.

Shoreline reconstruction activities would occur during the seasonal low river elevation period. To facilitate bank reconstruction activities, a temporary dam-like structure will be constructed to exclude water from the excavation.

4.1.4 Stabilization of Disturbed Areas

At the conclusion of removal alternatives A2, A3, and A4, any backfilled and disturbed areas would be graded and stabilized to prevent erosion and sedimentation.

4.1.5 Best Management Practices

Erosion and sediment control and housekeeping Best Management Practices (BMPs) will be implemented as part of removal alternatives A2 through A4. BMPs would provide for protection

of workers, the community, and the environment during all construction activities. Specific BMPs would be detailed in the final design.

4.1.6 Institutional Controls

Institutional controls (ICs) will be imposed to assure the continued protection of human health or the environment. ICs are legal and administrative tools such as restrictive covenants and well drilling prohibitions, and will be determined post-removal activities.

4.1.7 Post-Removal Action Monitoring

Monitored natural attenuation would be used as a finishing option to mitigate any residual amount of contaminants remaining in groundwater once the source area LNAPL is excavated. Regular long-term groundwater monitoring would be implemented to confirm and monitor for the progress of natural attenuation processes to reduce contaminant concentrations to below cleanup objectives. The detailed design and subsequent development of the post-removal Site care plan will identify the necessary analytical parameters, sampling frequency and reporting requirements.

4.2 Identification of Removal Action Alternatives

4.2.1 Alternative A1: No Action

Under this alternative, no action would be taken to remove, treat, or contain contaminated soils, groundwater, sediment, or surface water at the Avery Landing Site. Hazardous substances would remain as potential human health and environmental threats, and petroleum would continue to discharge into the St. Joe River. Natural processes would be expected to degrade contaminants in Site media but not a rate fast enough to protect human health and the environment.

4.2.2 Alternative A2: LNAPL Extraction and Ex Situ Thermal Desorption of Soils

In this alternative, soil having contaminant concentrations that exceed cleanup objectives would be excavated and transported to a soil stockpile area located on Site, followed by desorption of the contaminants from the soil matrix using a mobile low-temperature thermal desorption (LTTD) unit.

LTTD, also known as low-temperature thermal volatilization, thermal stripping, and soil roasting, is an ex situ cleanup technology that uses heat to physically separate volatile contaminants from excavated soils. Thermal desorbers are designed to heat contaminated soils in a chamber using electricity, propane, or natural gas, thereby volatilizing the moisture and organic contaminants. LTTD desorbs organic compounds without heating the soil to combustion temperatures. The vaporized contaminants are treated in a secondary treatment unit (e.g., an afterburner, catalytic oxidation chamber, condenser, or carbon adsorption unit) prior to discharge to the atmosphere. The thermally treated soil is then moved into a conditioner, where it is sprayed with water to cool it and minimize fugitive dust emissions. After cooling, the treated soil is stockpiled for analysis and reused as backfill. A schematic diagram of the LTTD process is shown in Figure 4-2. The feed rate, desorption temperature, and residence time of the materials in the chamber dictate the type of contaminants removed, as well as the degree to which the contaminants are removed.

With LTDD treatment, there is a potential for some contaminants with volatilization temperatures above the LTDD operating temperatures to remain in the soil/waste mixture. PCB contaminants would not be treated with LTDD treatment. However, PCB soil concentrations are below screening levels. Following treatment, the treated soil would be tested for the analytical parameters of concern, and assuming that the soil meets soil cleanup standards, the treated soil would be re-used on-Site. Soil not meeting cleanup objectives would be disposed of at an off-Site disposal facility that accepts PCB-contaminated soil. The LTDD system is designed to treat organic contaminants with boiling points less than 500 °F, and soil with less than 15% moisture content. Moisture content can be lowered in the waste feed preparation process if necessary. Most thermal units readily treat coarse-grained soils, but require longer processing times and consequently lower throughput rates for materials with high silt and clay contents.

LTDD units are either fixed or mobile, depending on their size and operating requirements. A mobile unit would be used at the Avery Landing Site. Thermally treated soil that meets cleanup objectives would be used to backfill the excavation. For cost estimating purposes, it was assumed that 10% of the soil would require retreatment using LTDD to meet cleanup objectives. It was also assumed that 10% of the contaminated soil would be untreatable and sent off Site for disposal.

Excavated areas would be backfilled with clean gravel prior to soil backfill. Gravel would be placed below the groundwater surface and soil would be placed above the gravel to allow for proper soil compaction. Soils not meeting cleanup objectives after treatment would be sent off-Site for disposal. Gravel and any additional backfill soil needed would be obtained from a nearby commercial gravel and soil yard.

During treatment activities, air monitoring would be conducted pursuant to Occupational Safety and Health Administration (OSHA) and National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations to ensure that workers and the public are not exposed to Site contamination above allowable levels. Air emission standards and potentially required air pollution control equipment could become a substantial cost and performance factor for on-Site LTDD.

Based on the soil volumes requiring treatment, and an overall average feed rate of 20 tons per hour, it is estimated that this alternative would require approximately 6.5 months from the time of mobilization to the time of demobilization. However, this time frame could be extended because bench or pilot treatability investigations may be required to determine optimal performance and operating parameters.

The LTDD cost estimate assumes that a total of 350 confirmation samples would be collected and analyzed for COCs during the anticipated 5-month treatment time. In addition, air samples would be collected monthly from one upwind and two downwind monitoring points to determine emission concentrations of COCs from the LTDD unit operation.

4.2.3 Alternative A3: LNAPL Extraction and Ex Situ Soil Washing

In this alternative, excavated soil not meeting cleanup criteria would be treated using soil washing. Soil washing is an ex situ treatment that consists of a combination of size separation

and water washing to remove hazardous substances and petroleum product from soil and concentrates them into a smaller volume. Surfactants would be used in conjunction with water to enhance contaminant removal. Backfill material would consist of both the treated soils meeting cleanup criteria and the clean soil overburden that was stockpiled during the process of accessing the contaminated material. Excavated areas would be backfilled with clean gravel prior to soil placement. Gravel would be placed to fill the excavation to just above the groundwater surface. Treated and/or clean soil would be placed above the gravel and then compacted. Soils not meeting cleanup objectives after treatment would be sent off-Site for disposal. Gravel and any additional backfill soil needed would be obtained from a nearby commercial gravel and soil yard.

A process flow diagram for soil washing is shown in Figure 4-3. The treatment process is further described in the treatability study report written by ART Engineering (ART 2009; Appendix F). The treatment effectiveness, based on the Site-specific treatability study, is also presented in the ART report. Based on the treatability study results, it is anticipated that water with surfactant would be used.

In the soil washing treatability study, wash water was successfully treated to remove soil fines and dispersed hydrocarbon. This would allow for the full-scale plant to be designed as a closed-loop system in which the water was continuously treated and reused. Upon completion of soil washing, any residual wash water would be treated and discharged by spreading on the treated soils.

According to the ART Engineering treatability study report, soil washing would produce residual filter cake (approximately 8% of treated soil volume) that would require further treatment or off-Site disposal.

Based on the soil volumes requiring treatment, and an overall estimated average production rate of 50 to 60 tons per hour (ART 2009, Appendix F), it is estimated that this alternative would require approximately 3.5 months to from the time of mobilization to the time of demobilization. However, this time frame could be extended because bench or pilot treatability investigations may be required to determine optimal performance and operating parameters.

4.2.4 Alternative A4: LNAPL Extraction and Off-Site Disposal

Under this alternative, contaminated soil not meeting cleanup criteria would be excavated, loaded into haul trucks, and transported to a CERCLA-approved off-Site disposal facility.

PCB-contaminated soil would be excavated and segregated from the non-PCB contaminated soil, loaded into haul trucks, and transported to an off-Site non-hazardous waste disposal facility that accepts PCB-contaminated soil. For purposes of this EE/CA, it is expected that the nearest suitable disposal facility for PCB-contaminated soil is the Waste Management Wenatchee Landfill in Wenatchee, Washington, at a road distance of about 280 miles from the Site. Approximately 15,600 cubic yards of PCB contaminated soil would be excavated and disposed of at a landfill. This volume was determined by analyzing data for PCB contamination and delineating PCB areas where PCB contamination was encountered. For purposes of this EE/CA, the depth of PCB contamination in these areas was assumed to be the Site-wide average excavation depth of 17 feet.

Excavated areas would be backfilled with clean gravel and soil obtained from a nearby commercial gravel yard. Gravel would be placed below the groundwater surface and soil would be placed above the gravel to allow for proper soil compaction.

Excavation is an effective method for physically removing contaminated subsurface material from the Site. Excavation involves the use of standard construction equipment. There are few limitations on the types of waste that can be excavated and removed.

Based on the estimated volume of soil that exceeds cleanup criteria, it is estimated that this alternative would require approximately 3.5 months from the time of mobilization to the time of demobilization.

Table 4-1 Removal Action Alternatives Draft Engineering Evaluation/Cost Analysis Avery Landing Site, Avery, Idaho	
Removal Action Alternatives	
Alternative	Description
A1	No Action
A2	LNAPL Extraction and Ex Situ Thermal Desorption (LTTD) of Soils
A3	LNAPL Extraction and Ex Situ Soil Washing
A4	LNAPL Extraction and Off-Site Disposal

Key:
 LNAPL = light non-aqueous phase liquid
 LTTD = low-temperature thermal desorption

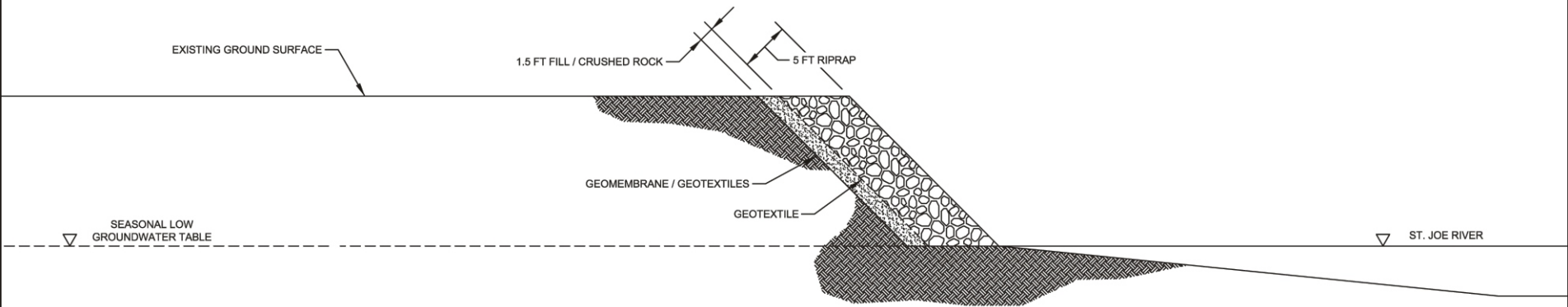
Table 4-2
Common Components of Removal Action Alternatives
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Common Components	
Description	Applicable Alternative
1. Excavation and LNAPL removal	A2, A3, and A4
2. Existing treatment/recovery system and debris removal	A2, A3, and A4
3. Bank reconstruction	A2, A3, and A4
4. Stabilization of disturbed areas	A2, A3, and A4
5. Best management practices	A2, A3, and A4
6. Institutional controls	A2, A3, and A4
7. Post-removal action monitoring	A2, A3, and A4

Key:
LNAPL = light non-aqueous phase liquid

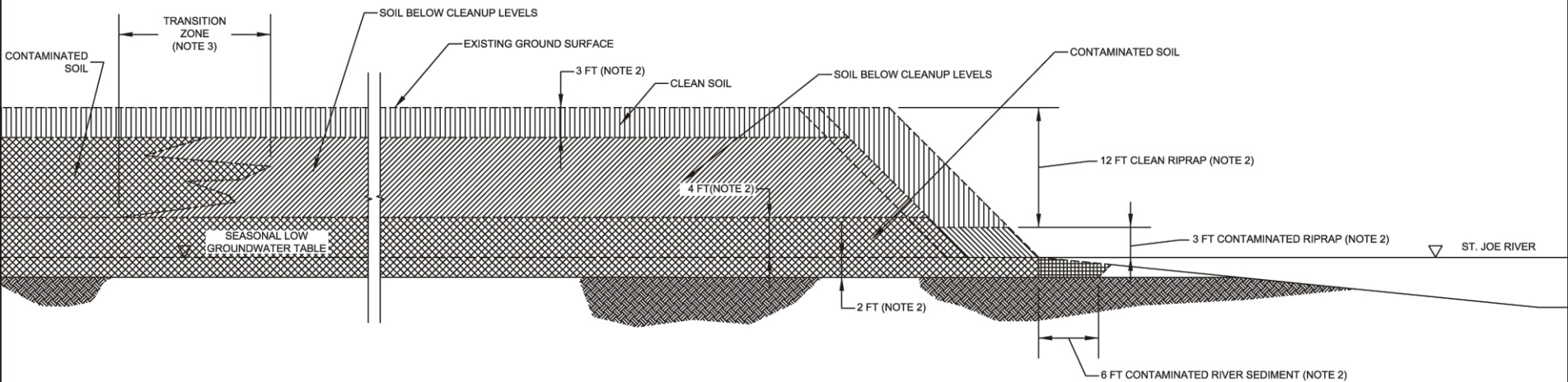
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STAGE 1: EXISTING CONDITIONS

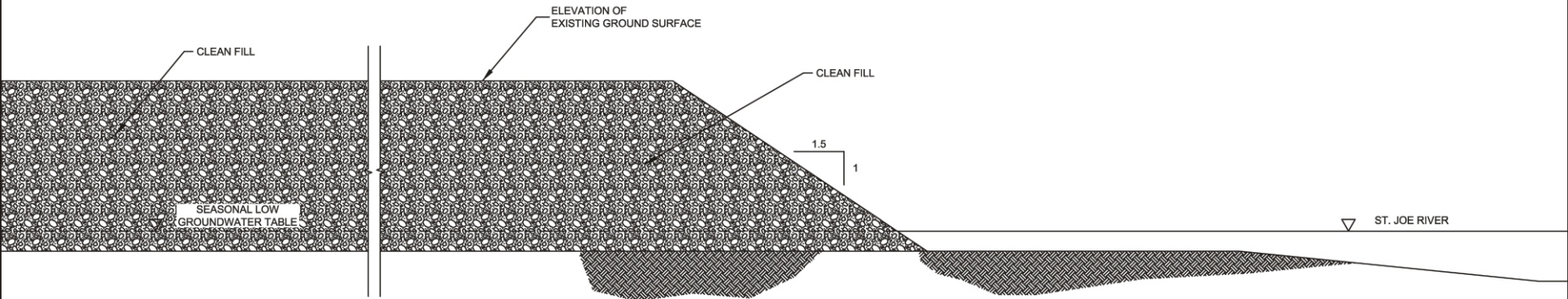


- NOTES
1. DIMENSIONS ARE ASSUMED FOR ESTIMATING PURPOSES.
 2. ASSUMED.
 3. TRANSITION BETWEEN SOILS REQUIRING TREATMENT AND SOILS WITH CONTAMINANTS BELOW CLEANUP LEVELS. TRANSITION LOCATIONS ARE VARIABLE AND WILL BE DETERMINED IN THE FIELD DURING SOIL REMOVAL.

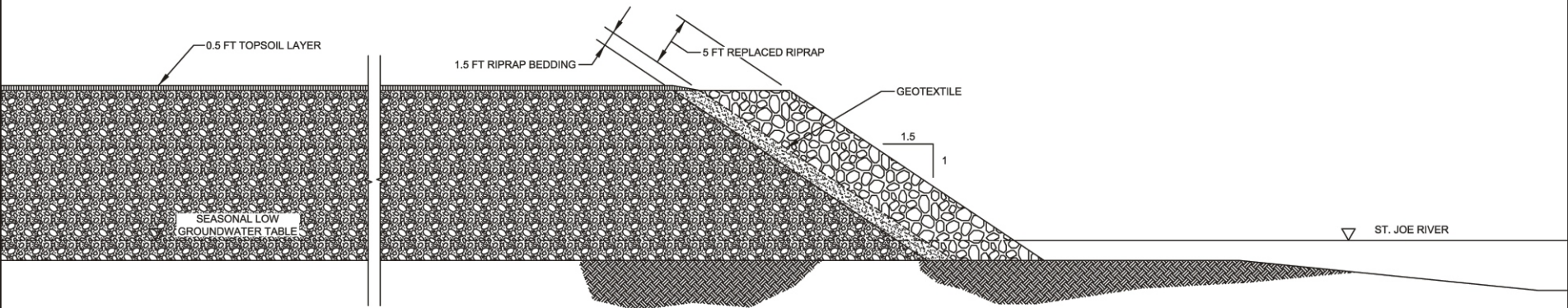
STAGE 2: SHORELINE AND TOTAL REMOVAL

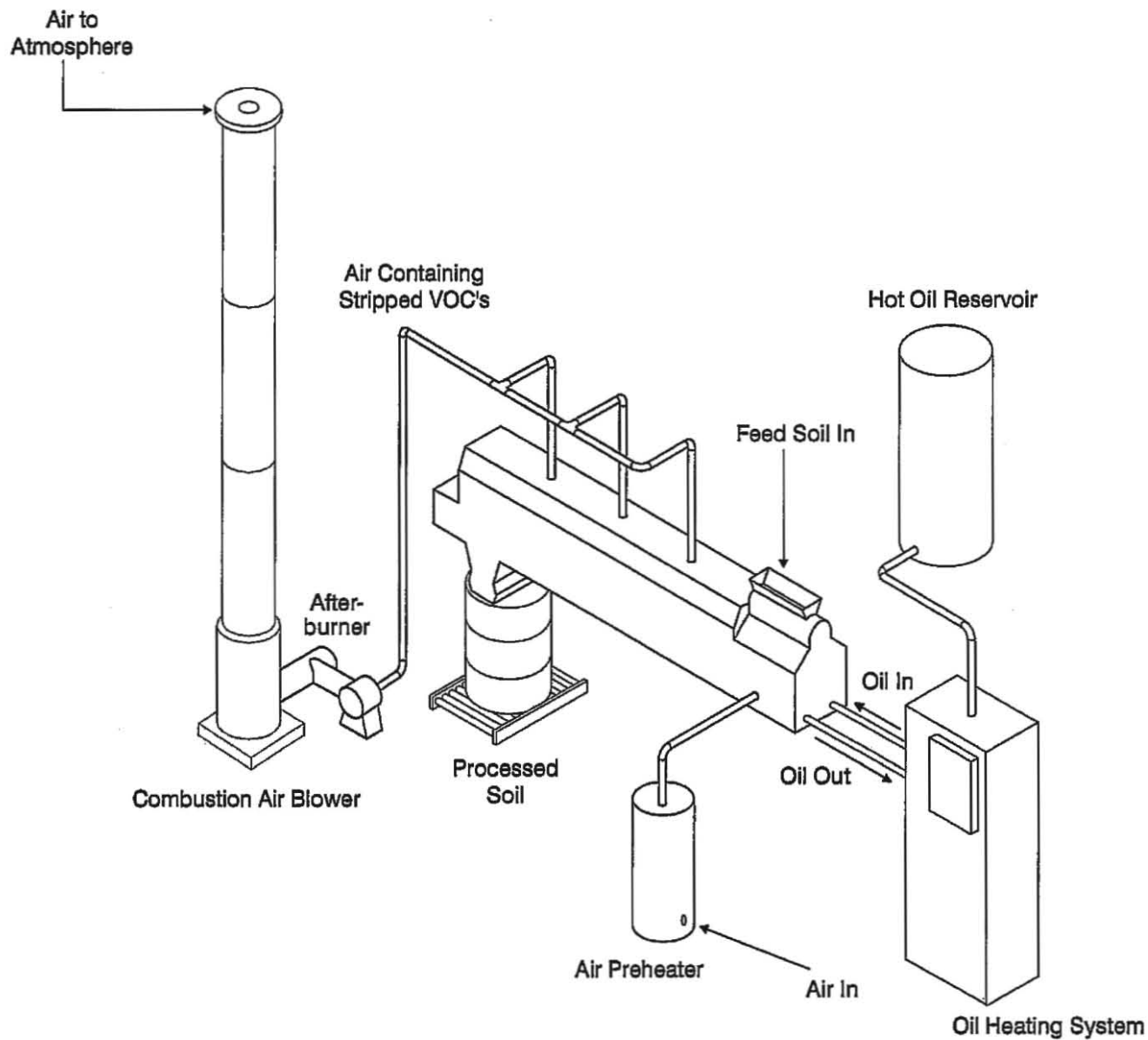


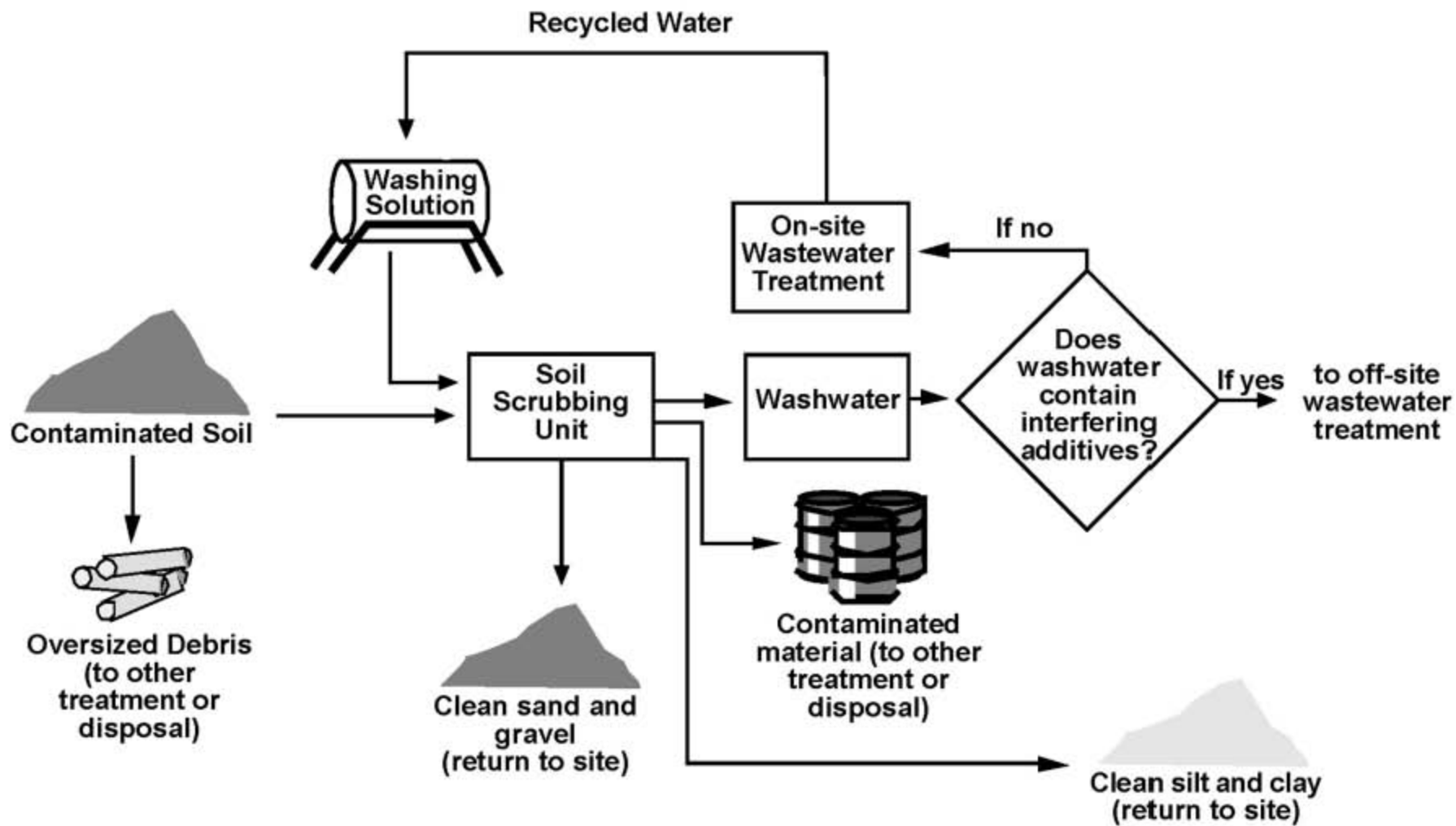
STAGE 3: SOIL BACKFILL



STAGE 4: FINAL CONDITIONS







5 Individual Analysis of Removal Action Alternatives

This section presents an individual analysis of the alternatives based on the short- and long-term effectiveness of each alternative relative to preventing discharges to surface waters and shorelines of the United States and to overall protection of public health and the environment. Three broad criteria—effectiveness, implementability, and cost—are used to evaluate each alternative against the scope of the removal action, and these criteria are described below.

Effectiveness

Effectiveness includes several evaluation factors, which are defined below.

Overall Protection of Human Health and the Environment: Assesses the ability of the alternative to be protective of human health and the environment under present and future land use conditions.

Compliance with ARARs: Identifies whether or not implementation of the alternative would comply with all chemical-specific, action-specific, and location-specific ARARs and TBC materials.

Long-term Effectiveness: Addresses the magnitude of residual risk remaining at the conclusion of removal activities; that is, addresses the adequacy and reliability of controls established by a removal action alternative to maintain reliable protection of human health and the environment over time.

Reduction of Toxicity, Mobility, and Volume through Treatment: Identifies whether or not implementation of the alternative would reduce contaminant toxicity (e.g., reduction of LNAPL contamination), mobility (e.g., preventing contaminated soil from reaching human receptors), or actual volume of the hazardous substances.

Short-term Effectiveness: This criterion addresses the effects of an alternative during the construction and implementation phase until the removal objectives are met. This criterion includes the time with which the remedy achieves protectiveness and potential to create adverse impacts on human health and the environment during construction and implementation.

Implementability

Implementability is evaluated in accordance with the criteria defined below.

Technical Feasibility: Evaluates construction and operational considerations, as well as demonstrated performance/useful life.

Administrative Feasibility: Evaluates activities such as statutory limits, permitting requirements, easements/rights of ways, and impact on adjoining property.

Availability of Service and Materials: Considers the availability of qualified contractors to handle Site preparation, design, equipment, personnel, services and materials, excavation, disposal capacity, and transportation in time to maintain the removal schedule, as well as the availability of disposal facilities that are licensed to accept hazardous and non-hazardous liquid/solid waste.

State Acceptance: Considers whether IDEQ is likely to concur with the proposed alternatives.

Community Acceptance: Considers level of stakeholder acceptance of the proposed alternatives.

Cost

Summaries of the alternative costs (except for the No Action alternative) are provided in Tables 5-1 through 5-3, and assumptions and references for the cost estimates are included in Appendix G. Each removal action alternative was evaluated to determine its project cost. The cost estimates contain the capital cost and annual operational and maintenance costs. The cost estimate for each component of the proposed alternatives is based on assumptions provided in this section and in Appendix G.

Costs are based in part on the estimated LNAPL plume area and the estimated 47,000 cubic yards of contaminated soil. Because of uncertainties about the exact amount of contaminated material and other uncertainties, actual cleanup costs may be expected to range by an approximate factor of $\pm 20\%$.

The present worth should be calculated for alternatives that will last longer than 12 months (EPA 1993). Under this EE/CA, removal action alternatives A2, A3, and A4 will require approximately 6 months or less of operation; therefore, present worth is not required for those alternatives.

5.1 Alternative A1: No Action

The No Action alternative was evaluated to provide a baseline to which other alternatives can be compared. Under this alternative, no action would be taken to reduce contaminant concentrations in affected Site media.

Effectiveness

This alternative does not remove or provide containment of any COC and does not meet the RAOs. Contaminant concentrations and existing and future risks to human health and the environment would remain unchanged. Petroleum product would continue to discharge to the St. Joe River.

Overall Protection of Human Health and the Environment: Under this alternative, no engineering or institutional controls will be implemented to address potential exposure pathways or to reduce contaminant concentrations in affected Site media. As a result, there will be no measurable contaminant reduction fast enough to protect human health and the environment.

Compliance with ARARs: This alternative is not compliant with ARARs or TBC materials.

Long-Term Effectiveness and Permanence: This alternative would leave contaminated soil in place which will result in unacceptable risks to human health and the environment. Natural processes will likely mitigate Site contaminants but at an unacceptable rate of degradation.

Reduction of Toxicity, Mobility, or Volume through Treatment: This alternative provides no reduction of toxicity, mobility, or volume through treatment. Natural processes will likely mitigate Site contaminants but at an unknown rate of degradation. ICs would not be implemented to protect human health and the environment while natural processes occurred.

Short-Term Effectiveness: There are no short-term risks associated with this alternative because there are no cleanup actions to be implemented.

Implementability

This alternative is readily implementable since there are no administrative or engineering actions to be implemented, administrative coordination is not required, and services or materials are not required..

Cost

There are no costs associated with this alternative.

5.2 Alternative A2: LNAPL Extraction and Ex Situ Thermal Desorption of Soils

This alternative involves the excavation of soil containing COC above cleanup objectives, followed by ex situ thermal desorption treatment for soil. LNAPL encountered on the surface of the groundwater during excavation activities will be pumped and treated by an oil/water separator and carbon polishing unit. The cleanup objectives will be protective for industrial, commercial, and/or occasional use by a recreational visitor.

Effectiveness

Alternative A2 will provide adequate protection of human health and the environment. The contaminated soil will be excavated and treated by LTDD, and excavated areas will be backfilled with the treated soils. LNAPL encountered during excavation activities will be pumped and treated using an oil/water separator and carbon polishing. Treatment residuals and/or PCB-containing materials will be disposed off Site at an appropriate disposal facility.

Overall Protection of Human Health and the Environment: Because this alternative involves excavation and LTDD treatment of contaminated soil, it will reduce potential risks to human health and the environment. Exposure pathways are eliminated with the Site-wide excavation and LTDD treatment of contaminants that exceed cleanup objectives.

Compliance with ARARs: This alternative would attain ARARs and TBC materials to the extent practicable.

Long-Term Effectiveness and Permanence: Under this alternative, the treatment residuals would be minimized at the conclusion of cleanup activities. The contaminated soil would be

excavated and treated by LTDD, and LNAPL would be treated using an oil/water separator and carbon polishing. Treatment residuals would be disposed of off Site at an appropriate disposal facility. ICs would be implemented to provide for long-term protectiveness to monitor the progress of natural attenuation processes.

Reduction of Toxicity, Mobility, or Volume: The toxicity, mobility, and volume of contaminants would be reduced through LTDD treatment. Heating the contaminated soils to temperatures sufficient to cause constituents to volatilize and desorb from the soil would reduce the overall volume of contaminated material. The vaporized constituents would be treated in a secondary treatment unit prior to discharge to the atmosphere. Condensers and carbon unit would trap organic compounds for subsequent treatment or disposal.

Short-Term Effectiveness: The potential for short-term impacts to workers and the surrounding community would be addressed by engineering controls and BMPs. Vaporized constituents would be treated by a secondary air treatment unit prior to discharge to the atmosphere. A Site-specific health and safety program would be implemented to protect workers. Potential environmental impacts such as erosion and sedimentation and fugitive dusts would be addressed by BMPs.

Implementability

LTDD utilizes readily available equipment. Commonly used earth-moving equipment and Site work procedures would be employed to excavate and transport contaminated soil and to place, contour, and stabilize the clean backfill and topsoil. Soils excavated from below the groundwater table require dewatering prior to treatment because of high moisture content. On-Site treatment requires significant land area to locate LTDD unit and store processed soils. The time required to implement this alternative may be lengthy because bench or pilot treatability investigations may be required to determine optimal performance and operating parameters, and because of design considerations associated with scaling up to full-scale operation.

Cost

The estimated cost is \$10,540,000 (Table 5-1).

5.3 Alternative A3: LNAPL Extraction and Ex Situ Soil Washing

This alternative involves the excavation of soil containing COC above cleanup objectives, followed by ex situ soil washing to remove the contaminants. The cleanup objectives will be protective for industrial, commercial, and/or occasional use by a recreational visitor.

Effectiveness

Alternative A3 will provide adequate protection of human health and the environment. The contaminated soil would be excavated and treated by soil washing using a surfactant as a chemical additive. Excavated areas would then be backfilled with the treated soils. LNAPL encountered during excavation activities will be pumped and treated using an oil/water separator and carbon polishing unit. Treatment residuals and/or PCB-containing materials will be disposed off Site at an appropriate disposal facility.

Overall Protection of Human Health and the Environment: Because this alternative involves excavation and the subsequent scrubbing of contaminated soil, it will reduce potential risks to human health and the environment. Exposure pathways are eliminated with the Site-wide excavation and mechanical process to scrub soils of contaminants that exceed cleanup objectives.

Compliance with ARARs/TBC materials: This alternative would attain ARARs and TBC materials to the extent practicable.

Long-Term Effectiveness and Permanence: Under this alternative, the treatment residuals would be minimized at the conclusion of cleanup activities. The contaminated soil would be excavated and scrubbed, and LNAPL would be treated using an oil/water separator and carbon polishing. Treatment residuals would be disposed of off Site at an appropriate disposal facility. ICs would be implemented to provide for long-term protectiveness to monitor or test the progress of natural attenuation processes.

Reduction of Toxicity, Mobility, or Volume: The volume of contaminants would be reduced through soil washing treatment. The soil washing treatability study results (Appendix F; ART 2009) indicated that significant hydrocarbon removal can be achieved for washed gravel and sand fractions, which were 95% of the soil mass on a dry weight basis. The scrubbing process removes hazardous contaminants and petroleum hydrocarbons and concentrates them into a smaller volume for off-Site disposal.

Short-Term Effectiveness: The potential for short-term impacts to workers and the surrounding community would be addressed by engineering controls and BMPs. A Site-specific health and safety program would be implemented to protect workers. Potential environmental impacts such as erosion and sedimentation and fugitive dusts would be addressed by BMPs.

Implementability

Soil washing technology is well understood and would be easily implemented at the Site. Commonly used earth-moving equipment and Site work procedures would be employed to excavate and transport contaminated soil and to place, contour, and stabilize the clean backfill and topsoil. On-Site treatment requires significant land area to locate the soil washing unit and store processed soils. The time required to implement this alternative may be lengthy because bench or pilot treatability investigations may be required to determine optimal performance and operating parameters, and because of design considerations associated with scaling up to full-scale operation.

Cost

The estimated cost is \$7,890,000 (Table 5-2).

5.4 Alternative A4: LNAPL Extraction and Off-Site Disposal

This alternative involves the excavation and off-Site disposal of soil containing COC above cleanup objectives. The cleanup objectives would be protective for industrial, commercial, and/or occasional use by a recreational visitor.

Effectiveness

Alternative A4 will provide adequate protection of human health and the environment. The contaminated soil would be excavated and transported off Site for disposal at an appropriate facility. LNAPL encountered during excavation activities would be pumped and treated using an oil/water separator and carbon polishing.

Overall Protection of Human Health and the Environment: Because this alternative involves collection of LNAPL and off-Site disposal of contaminated soil, it will reduce potential risks to human health and the environment. Exposure pathways would be eliminated with the Site-wide excavation of contaminants that exceed cleanup objectives.

Compliance with ARARs/TBC materials: This alternative would attain ARARs and TBC materials to the extent practicable.

Long-Term Effectiveness and Permanence: Under this alternative, the LNAPL would be treated using an oil/water separator and carbon polishing. Treatment residuals would be disposed of off Site at an approved disposal facility. The contaminated soil would be excavated and also be disposed of off Site at an approved disposal facility. ICs would be implemented to provide for long-term protectiveness to monitor or test the progress of natural attenuation processes.

Reduction of Toxicity, Mobility, or Volume: The alternative would reduce the mobility and toxicity of contaminants, but not the volume of contaminants. Contaminant mobility is reduced because contaminant affected media will be placed within a secure disposal facility, and contaminant toxicity is reduced because potential exposure pathways no longer exist.

Short-Term Effectiveness: There is limited short-term impacts to the community from hauling. However, the potential for short-term impacts to workers and the surrounding community would be addressed by engineering controls and BMPs. A Site-specific health and safety program would be implemented to protect workers. Potential environmental impacts such as erosion and sedimentation and fugitive dusts would be addressed by BMPs.

Implementability

This alternative is readily implementable because no active treatment technologies would be used. Excavation and off-Site disposal is a relatively simple process, with proven procedures and demonstrated performance. This technology has been widely used for disposal of contaminated soil and is a labor-intensive practice with little potential for further automation. Commonly used earth-moving equipment and Site work procedures would be employed to excavate and transport contaminated soil and to place, contour, and stabilize the clean backfill and topsoil.

Cost

There are no capital or O&M costs associated with this alternative. The estimated cost is \$8,500,000 (Table 5-3).

Table 5-1
Removal Action Cost Analysis, Alternative A2
LNAPL Extraction and Ex Situ Thermal Desorption of Soils
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Direct Capital Costs				
Item Description	Quantity	Unit	Cost/Unit	Cost
Field Overhead and Oversight	6.5	month	\$19,000	\$123,500
Mobilization and Demobilization (non-thermal equipment)	1	l.s.	\$3,500	\$3,500
Dewatering Pad	1	l.s.	\$15,000	\$15,000
3000 PSI Pressure Washer for deconning	1	ea	\$6,875	\$6,875
Excavation of Overburden	90,769	c.y.	\$2.52	\$228,738
Excavation of Contaminated Soil	46,950	c.y.	\$3.52	\$165,265
Material Hauling (from excavation to treatment unit/storage area)	137,719	c.y.	\$2.64	\$363,579
Low Temperature Thermal Desorption Treatment	46,950	c.y.	\$89.05	\$4,181,000
Retreat 10% using LTTD	4,695	c.y.	\$89.05	\$418,092
Disposal of Process Residue/Untreatable Soil	4,695	c.y.	\$27.40	\$128,644
Transportation of Process Residue/Untreatable Soil	4,695	c.y.	\$34.25	\$160,804
Material Hauling (from treatment unit/storage area to excavation)	137,719	c.y.	\$2.64	\$363,579
Backfill gravel trench	13,502	c.y.	\$0.67	\$9,046
Soil Placement and Compaction	137,719	c.y.	\$0.43	\$59,219
Seeding	4.18	acre	\$2,022	\$8,461
Fertilizer	4.18	acre	\$595	\$2,490
Confirmation Sampling (treatment unit)	100	ea	\$200	\$20,000
Confirmation Sampling (excavation)	250	ea	\$200	\$50,000
LNAPL Extraction and Treatment Equipment Rental	5	month	\$23,502	\$117,510
LNAPL Extraction/Treatment Equipment Mobe/Demobe	1	l.s.	\$13,050	\$13,050
LNAPL Extraction/Treatment Equipment Expendables	2	charge	\$18,580	\$37,160
LNAPL Labor (2 skilled laborers)	6.5	month	\$23,056	\$149,864
Transportation of LNAPL to incinerator	1	Load	\$3,375.00	\$3,375
LNAPL Disposal (Incineration)	2,500	gallons	\$0.50	\$1,250
Roadway - Subgrade preparation	30,000	s.f.	\$0.50	\$15,000
Roadway - gravel base course	1,111	c.y.	\$54	\$59,994
Roadway - bituminous stabilized top course	3,333	s.y.	\$24	\$79,999
Roadway - 2-inch asphalt pavement layer	3,333	s.y.	\$12	\$39,996
Silt Curtain	300	l.f.	\$15	\$4,500
Excavate and Load Riprap	6,000	c.y.	\$10	\$60,000
Haul riprap to/from stockpile	4,806	c.y.	\$2.64	\$12,688
Crushed Stone for Bank Reconstruction	1,800	c.y.	\$30	\$54,000
Geotextile	32,400	s.f.	\$0.40	\$12,960
Riprap from off-site	1,194	c.y.	\$65	\$77,610
Place Riprap	6,000	c.y.	\$25	\$150,000
Subtotal Direct Capital Costs (rounded to nearest \$10,000)				\$7,200,000
Indirect Capital Costs				
Engineering and Design (7%)				\$504,000
Administration (5%)				\$360,000
Legal Fees and License/Permit Costs (5%)				\$360,000
3rd Party Construction Oversight (5%)				\$360,000
Subtotal Indirect Capital Costs				\$1,584,000
Subtotal Capital Costs				\$8,784,000
Contingency Allowance (20%)				\$1,757,000
Total Alternative Cost (rounded to nearest \$10,000)				\$10,540,000

Key:

LNAPL = Liquid non-aqueous phased liquid.

l.s. = Lump sum.

c.y. = Cubic yard.

PSI = Pounds per square inch.

l.f. = linear foot.

s.f. = square foot.

Table 5-2
Removal Action Cost Analysis, Alternative A3
LNAPL Extraction and Ex Situ Soil Washing
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Direct Capital Costs				
Item Description	Quantity	Unit	Cost/Unit	Cost
Field Overhead and Oversight	3.5	month	\$19,000	\$66,500
Mobilization and Demobilization (non-treatment equipment)	1	l.s.	\$3,500	\$3,500
Dewatering Pad	1	l.s.	\$15,000	\$15,000
3000 PSI Pressure Washer for deconning	1	ea	\$6,875	\$6,875
Excavation of Overburden	90,769	c.y.	\$2.52	\$228,738
Excavation of Contaminated Soil	46,950	c.y.	\$3.52	\$165,265
Material Hauling (from excavation to treatment unit/storage area)	137,719	c.y.	\$2.64	\$363,579
Mobe/Demobe Soil Washing Equipemt	1	l.s.	\$520,000	\$520,000
Soil Washing Processing Costs	46,950	c.y.	\$41.10	\$1,929,653
Retreat 10% using Soil Washing	4,695	c.y.	\$41.10	\$192,965
Disposal of Process Residue/Untreatable Soil	4,695	c.y.	\$27.40	\$128,644
Transportation of Process Residue/Untreatable Soil	4,695	c.y.	\$34.25	\$160,804
Material Hauling (from treatment unit/storage area to excavation)	137,719	c.y.	\$2.64	\$363,579
Purchase & transport of additional fill	4,695	c.y.	\$7.00	\$32,865
Backfill gravel trench	13,502	c.y.	\$0.67	\$9,046
Soil Placement and Compaction	137,719	c.y.	\$0.43	\$59,219
Seeding	4.18	acre	\$2,022	\$8,461
Fertilizer	4.18	acre	\$595	\$2,490
Confirmation Sampling (treatment unit)	100	ea	\$200	\$20,000
Confirmation Sampling (excavation)	250	ea	\$200	\$50,000
LNAPL Extraction and Treatment Equipment Rental	2	month	\$23,502	\$52,450
LNAPL Extraction/Treatment Equipment Mobe/Demobe	1	l.s.	\$13,050	\$13,050
LNAPL Extraction/Treatment Equipment Expendables	2	charge	\$18,580	\$37,160
LNAPL Labor (2 skilled laborers)	3.5	month	\$23,056	\$80,696
Transportaion of LNAPL to incinerator	1	Load	\$3,375.00	\$3,375
LNAPL Disposal	2,500	gallons	\$0.50	\$1,250
Roadway - Subgrade preparation	30,000	s.f.	\$0.50	\$15,000
Roadway - gravel base course	1,111	c.y.	\$54	\$59,994
Roadway - bituminous stabilized top course	3,333	s.y.	\$24	\$79,999
Roadway - 2-inch asphalt pavement layer	3,333	s.y.	\$12	\$39,996
Silt Curtain	300	l.f.	\$15	\$4,500
Excavate and Load Riprap	6,000	c.y.	\$10	\$60,000
Haul riprap to/from stockpile	4,806	c.y.	\$2.64	\$12,688
Crushed Stone for Bank Reconstruction	1,800	c.y.	\$30	\$54,000
Geotextile	32,400	s.f.	\$0.40	\$12,960
Riprap from off-site	6,000	c.y.	\$65	\$390,000
Place Riprap	6,000	c.y.	\$25	\$150,000
Subtotal Direct Capital Costs (rounded to nearest \$10,000)				\$5,390,000
Indirect Capital Costs				
Engineering and Design (7%)				\$377,000
Administration (5%)				\$270,000
Legal Fees and License/Permit Costs (5%)				\$270,000
3rd Party Construction Oversight (5%)				\$270,000
Subtotal Indirect Capital Costs				\$1,187,000
Subtotal Capital Costs				\$6,577,000
Contingency Allowance (20%)				\$1,315,000
Total Alternative Cost (rounded to nearest \$10,000)				\$7,890,000

Key:

LNAPL = Liquid non-aqueous phased liquid.

l.s. = Lump sum.

c.y. = Cubic yard.

PSI = Pounds per square inch.

l.f. = linear foot.

s.f. = square foot.

Table 5-3
Removal Action Cost Analysis, Alternative A4
LNAPL Extraction and Off-Site Disposal
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Direct Capital Costs				
Item Description	Quantity	Unit	Cost/Unit	Cost
Field Overhead and Oversight	3.5	month	\$19,000	\$66,500
Mobilization and Demobilization (non-treatment equipment)	1	l.s.	\$3,500	\$3,500
Pre-design PCB Investigation	1	l.s.	\$25,000	\$25,000
Dewatering Pad	1	l.s.	\$15,000	\$15,000
3000 PSI Pressure Washer for deconning	1	ea	\$6,875	\$6,875
Excavation of Overburden	90,769	c.y.	\$2.52	\$228,738
Excavation of Contaminated Soil	46,950	c.y.	\$3.52	\$165,265
Material Handling	137,719	c.y.	\$2.64	\$363,579
Disposal of Contaminated Soil	42,950	ton	\$20	\$858,995
Transportation of Contaminated Soil	42,950	ton	\$24.50	\$1,052,269
Disposal of PCB Contaminated Soil	21,372	ton	\$21.50	\$459,498
Transportation of PCB Contaminated Soil	21,372	ton	\$36.30	\$775,804
Purchase & transport of additional fill	42,682	c.y.	\$7.00	\$298,774
Material Hauling (from treatment unit/storage area to excavation)	90,769	c.y.	\$2.64	\$239,630
Backfill gravel trench	13,502	c.y.	\$0.67	\$9,046
Soil Placement and Compaction	137,719	c.y.	\$0.43	\$59,219
Seeding	4.18	acre	\$2,022	\$8,461
Fertilizer	4.18	acre	\$595	\$2,490
Confirmation Sampling (treatment unit)	100	ea	\$200	\$20,000
Confirmation Sampling (excavation)	250	ea	\$200	\$50,000
LNAPL Extraction and Treatment Equipment Rental	3.5	month	\$23,502	\$82,257
LNAPL Extraction/Treatment Equipment Mobe/Demobe	1	l.s.	\$13,050	\$13,050
LNAPL Extraction/Treatment Equipment Expendables	2	charge	\$18,580	\$37,160
LNAPL Labor (2 skilled laborers)	3.5	month	\$23,056	\$80,696
Transportation of LNAPL to incinerator	1	Load	\$3,375.00	\$3,375
LNAPL Disposal	2,500	gallons	\$0.50	\$1,250
Roadway - Subgrade preparation	30,000	s.f.	\$0.50	\$15,000
Roadway - gravel base course	1,111	c.y.	\$54	\$59,994
Roadway - bituminous stabilized top course	3,333	s.y.	\$24	\$79,999
Roadway - 2-inch asphalt pavement layer	3,333	s.y.	\$12	\$39,996
Silt Curtain	300	l.f.	\$15	\$4,500
Excavate and Load Riprap	6,000	c.y.	\$10	\$60,000
Haul riprap to/from stockpile	4,806	c.y.	\$2.64	\$12,688
Crushed Stone for Bank Reconstruction	1,800	c.y.	\$30	\$54,000
Geotextile	32,400	s.f.	\$0.40	\$12,960
Riprap from off-site	6,000	c.y.	\$65	\$390,000
Place Riprap	6,000	c.y.	\$25	\$150,000
Subtotal Direct Capital Costs (rounded to nearest \$10,000)				\$5,810,000
Indirect Capital Costs				
Engineering and Design (7%)				\$407,000
Administration (5%)				\$290,000
Legal Fees and License/Permit Costs (5%)				\$290,000
3rd Party Construction Oversight (5%)				\$290,000
Subtotal Indirect Capital Costs				\$1,277,000
Subtotal Capital Costs				\$7,087,000
Contingency Allowance (20%)				\$1,417,000
Total Alternative Cost (rounded to nearest \$10,000)				\$8,500,000

Key:

LNAPL = Liquid non-aqueous phased liquid.

l.s. = Lump sum.

c.y. = Cubic yard.

PSI = Pounds per square inch.

l.f. = linear foot.

s.f. = square foot.

6 Comparative Analysis of Removal Action Alternatives

In Section 5, each removal alternative was analyzed independently, without consideration of other alternatives. In this section, the alternatives are compared, considering effectiveness, implementability, and cost. This comparative analysis identifies the advantages and disadvantages of each alternative relative to the others.

Alternative A1, the No Action alternative, is not considered for this comparative analysis because it is not protective of human health and the environment. The remaining alternatives are:

Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption (LTTD) of Soils

Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing

Alternative A4 – LNAPL Extraction and Off-Site Disposal

6.1 Effectiveness

A summary of the effectiveness comparison is provided in Table 6-1.

6.1.1 Overall Protection of Human Health

Alternatives A2 (LTTD), A3 (Soil Washing), and A4 (Off-Site Disposal) provide adequate protection of human health and the environment. The potential short-term risks to the public associated with Alternatives A2 and A3 are less than Alternative A4 because Alternative A4 would require off-Site transport of a larger quantity of contaminated material. Additionally, Alternatives A2 and A3 result in a greater contaminant volume reduction than Alternative A4. Further, Alternative A3, when compared to Alternative A2, is likely more protective because it provides a closed system that remains unaffected by external conditions and does not potentially require dewatering of contaminated materials.

On this basis, the alternatives are ranked as follows for overall protection of human health (most to least effective):

1. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing
2. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils
3. Alternative A4 – LNAPL Extraction and Off-Site Disposal

6.1.2 Compliance with ARARs/TBC Materials

Alternatives A2, A3, and A4 would attain ARARs and TBC materials to the extent practicable. However, a greater number of action- and chemical-specific ARARs would likely apply to Alternatives A2 and A3 than Alternative A4.

On this basis, the alternatives are ranked as follows for compliance with ARARs and TBC materials:

1. Alternative A4 – LNAPL Extraction and Off-Site Disposal
2. Alternative A3 – LNAPL Extraction and Soil Washing
3. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils

6.1.3 Long-Term Effectiveness and Permanence

Alternatives A2, A3, and A4 would require the same post-removal activities such as ICs and long-term monitoring. Alternative A2, when compared to Alternatives A3 and A4, likely results in less treatment residuals at the conclusion of the cleanup process to manage. Alternative A4 requires the most long-term reliability of disposal management controls providing protection because a larger quantity of contaminated material will be placed at an appropriate disposal facility.

Based on a side-by-side comparison, the alternatives are ranked as follows for long-term effectiveness (most to least effective):

1. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils
2. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing
3. Alternative A4 – LNAPL Extraction and Off-Site Disposal

6.1.4 Reduction of Toxicity, Mobility, or Volume

Alternative A2 (LTTD) provides the greatest reduction in toxicity, mobility, and volume of Alternative A2 provides the greatest reduction in contaminant toxicity, mobility, and volume because LTTD will volatilize and desorb organic contaminants from the soil. Alternative A3 provides greater reduction than Alternative A4 which employs no treatment.

On this basis, the alternatives are ranked as follows for reduction of toxicity, mobility, or volume criteria (most to least reduction):

1. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils
2. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing
3. Alternative A4 – LNAPL Extraction and Off-Site Disposal

6.1.5 Short-Term Effectiveness

Alternatives A2 and A3 may require more time than Alternative A4 to achieve RAOs because bench- or pilot-scale treatability investigations are likely required to determine optimal performance and operating parameters. Alternative A4 would result in greater short-term impacts to the community and the environment because a larger quantity of contaminated material would be hauled off Site for disposal at an appropriate disposal facility. However, the potential for such impacts are expected to be minimized by engineering controls and BMPs.

The alternatives are ranked as follows for short-term effectiveness (most to least effective):

1. Alternative A4 – LNAPL Extraction and Off-Site Disposal
2. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing
3. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils

6.2 Implementability

A summary of the implementability comparison is provided in Table 6-2.

6.2.1 Technical Feasibility

Alternatives A2 (LTTD) and A3 (Soil Washing) likely require greater technical considerations due to problems associated with technology design and implementation that may lead to schedule delays. For example: the A2 design must address the primary thermal treatment operation and a secondary off-gas treatment unit and some pre- and post-processing of soil; and the Alternative A3 design must address the soil type and the type of additives which may cause some difficulty in the treatment of used wastewater and the disposal of residuals from the washing process as well as pre- and post-processing of scrubbed soil. There are no significant technical concerns expected with Alternative A4 (Off-Site Disposal).

On this basis, the alternatives are ranked as follows for the technical feasibility criteria (most to least feasible):

1. Alternative A4 – LNAPL Extraction and Off-Site Disposal
2. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils
3. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing

6.2.2 Administrative Feasibility

Alternative A2 would require greater coordination with other offices because operation of LTTD units must demonstrate compliance with substantive permit requirements. Further, monitoring of LTTD systems and waste streams systems (e.g., concentrations of particulates, volatiles, and carbon monoxide in stack gas) are by their nature different. Alternative A3 would also require greater coordination with other offices and agencies because the presence of additives may cause some difficulty in the treatment of the used wastewater and the disposal of residuals from the washing process.

The alternatives are ranked as follows for administrative feasibility (most to least feasible):

1. Alternative A4 – LNAPL Extraction and Off-Site Disposal
2. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing and LNAPL Extraction
3. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils

6.2.3 Availability of Service and Materials

Alternative A2 would require more extensive design work and specialized equipment than Alternatives A3 and A4 because of primary and secondary process operations and pre- and post-processing of soil such as screening and backfilling requirements. A3 would require more design work and specialized equipment than Alternative A4 because of soil pre-processing, soil washing operations, and disposal of wastewater. Alternative A4 would utilize readily available equipment and personnel and there is adequate off-Site disposal services.

The alternatives are ranked as follows for availability of service and materials (most to least available):

1. Alternative A4 – LNAPL Extraction and Off-Site Disposal
2. Alternative A3 – LNAPL Extraction and Ex Situ Soil Washing
3. Alternative A2 – LNAPL Extraction and Ex Situ Thermal Desorption of Soils

6.2.4 State and Community Acceptance

State and community acceptance will be addressed once comments on the EE/CA have been received.

6.3 Cost

While a cost estimate prepared as part of detailed design will provide a more accurate cost, it is beyond the scope of an EE/CA. In developing the individual cost estimates, there are a number of uncertainties that must be accounted for. There is a considerable amount of Site data; however, data gaps associated with the extent contamination still exist. Therefore, the volume of material to be treated or disposed of off Site was increased by 10% to account for unknowns. Also for Alternatives A2 and A3, it was assumed that 10% of the initially treated material would have to undergo a second round of treatment.

Finally, for all of the action alternatives, a 20% contingency factor was added to address potential unknowns that may increase the cost of implementing the individual alternative.

6.3.2 Cost Evaluation

In evaluating the costs of the removal action alternatives, there are three components: capital cost, annual post-removal Site controls cost, and total project cost.

For the Avery Landing Site, the capital costs of the action alternatives are:

Alternative A2: LNAPL Extraction and Ex Situ Thermal Desorption of Soils	\$10,540,000
Alternative A3: LNAPL Extraction and Ex Situ Soil Washing	\$7,890,000
Alternative A4: LNAPL Extraction and Off-Site Disposal	\$8,500,000

None of the alternatives requires significant post-removal Site controls beyond monitoring for the effectiveness of the removal action.

6.4 Summary of Comparative Analysis

A summary of the comparative analysis for the removal action alternatives is presented in Table 6-3.

Table 6-1
Summary of Effectiveness Comparison
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

1. Overall Protection of Human Health

1	A3 - LNAPL Extraction and Ex Situ Soil Washing
2	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils
3	A4 - LNAPL Extraction and Off-Site Disposal

2. Compliance with ARARs/TBC Materials

1	A4 - LNAPL Extraction and Off-Site Disposal
2	A3 - LNAPL Extraction and Ex Situ Soil Washing
3	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils

3. Long-Term Effectiveness and Permanence

1	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils
2	A3 - LNAPL Extraction and Ex Situ Soil Washing
3	A4 - LNAPL Extraction and Off-Site Disposal

4. Reduction of Toxicity, Mobility, or Volume

1	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils
2	A3 - LNAPL Extraction and Ex Situ Soil Washing
3	A4 - LNAPL Extraction and Off-Site Disposal

5. Short-Term Effectiveness

1	A4 - LNAPL Extraction and Off-Site Disposal
2	A3 - LNAPL Extraction and Ex Situ Soil Washing
3	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils

Key:

ARAR = applicable or relevant and appropriate

LNAPL = light non-aqueous phase liquid

TBC = to be considered

Table 6-2
Summary of Implementability Comparison
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

1. Technical Feasibility	
1	A4 - LNAPL Extraction and Off-Site Disposal
2	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils
3	A3 - LNAPL Extraction and Ex Situ Soil Washing
2. Administrative Feasibility	
1	A4 - LNAPL Extraction and Off-Site Disposal
2	A3 - LNAPL Extraction and Ex Situ Soil Washing
3	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils
3. Availability of Service and Materials	
1	A4 - LNAPL Extraction and Off-Site Disposal
2	A3 - LNAPL Extraction and Ex Situ Soil Washing
3	A2 - LNAPL Extraction and Ex Situ Thermal Desorption of Soils
4. State and Community Acceptance	
State and community acceptance will be addressed once comments on the EE/CA have been received.	

Key:

EE/CA = Engineering Evaluation/Cost Analysis

LNAPL = light non-aqueous phase liquid

Table 6-3 Summary of Comparative Analysis Draft Engineering Evaluation/Cost Analysis Avery Landing Site, Avery, Idaho			
Alternative Description	Qualitative Ranking		Cost
	Effectiveness	Implementability	
Alternative 2 LNAPL Extraction and Ex Situ Thermal Desorption of Soils	MODERATE -- Includes treatment of contaminated soils and wastes. -- May require additional bench- or pilot-scale testing to optimize design. -- Would significantly reduce toxicity, mobility, and volume of COCs. -- ARARs and TBC materials will be met, although more action- and chemical-specific ARARs may apply. -- Treatment residues would likely require off-Site disposal.	LOW -- Readily implementable based on standard construction practices. -- However, substantive requirements must be addressed before implementation -- Public may oppose technology, viewing it as similar to incineration. -- Time required to implement may be relatively long compared to other alternatives.	\$10,540,000
Alternative 3 LNAPL Extraction and Ex Situ Soil Washing	MODERATE -- Includes treatment of contaminated soils and wastes. -- May require additional bench- or pilot-scale testing to optimize design. -- Would reduce exposure to workers and visitors to an acceptable level. -- Will substantially reduce the volume and concentration of existing contamination. -- ARARs and TBC materials will be met, although more action- and chemical-specific ARARs may apply. -- Treatment residues would likely require off-Site disposal.	MODERATE -- Readily implementable based on standard construction practices. -- Substantive requirements must be addressed.	\$7,890,000
Alternative 4 LNAPL Extraction and Off-Site Disposal	MODERATE -- This alternative would reduce on-Site toxicity, mobility, and volume. -- However, soils and wastes are only transferred to a new location. -- Greater short term impacts because of quantity of contaminated material transported off Site. -- ARARs and TBC materials will be met.	MODERATE -- Readily implementable based on standard construction practices. -- Disposal capacity is available. -- Public may oppose increased truck traffic.	\$8,500,000

Key:
 ARAR = applicable or relevant and appropriate requirement
 COC = contaminant of concern
 LNAPL = light non-aqueous phase liquid
 TBC = to be considered

7 Recommended Removal Action Alternative

Based upon the alternative evaluations conducted in Section 6, Alternative A4, LNAPL Extraction and Off-Site Disposal, is the recommend removal action alternative.

The key advantages of Alternative A4 are that it is the most straightforward and least likely problematic alternative. Although Alternative A4 is not the least expensive to implement, the additional costs would be offset in part by avoiding potential cost increases due to administrative and technical feasibility concerns associated with Alternatives A2 (LTTD) and A3 (Soil Washing) such as bench and pilot scale treatability investigations and design requirements. Additionally, Alternative A4 is likely the most adaptable to evolving Site-specific conditions that would emerge during cleanup activities.

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Groundwater Monitoring Data, 2007 EPA Removal Assessment and 2009 Potlatch Field Investigation

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**Groundwater Monitoring Data
2007 EPA Removal Assessment**

<p align="center">Table 3-1</p> <p align="center">Summary of Borings and Monitoring Wells</p> <p align="center">2007 EPA Removal Assessment</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>				
EPA Boring ID	Installation Date	Total Depth (feet bgs)	Well Diameter (inches)	Screened Interval (feet bgs)
EMW-01	4/16/2007	12.6	2	2.5 - 12.5
EMW-02	4/17/2007	16.0	2	5.5 - 15.5
EMW-03	4/17/2007	19.5	2	9 - 19
EMW-04	4/17/2007	17	2	7 - 17
EMW-05	4/18/2007	19.5	2	9 - 19
EMW-06	4/18/2007	18.8	2	8.5 - 18.5
ESB-01	4/18/2007	9.0	N/A	N/A
ESB-02 ⁽¹⁾	4/18/2007	3, 5, 3 ⁽¹⁾	N/A	N/A
ESB-03	4/18/2007	13.0	N/A	N/A
ESB-04	4/18/2007	9.0	N/A	N/A
ESB-05	4/19/2007	25.0	N/A	N/A
ESB-06	4/19/2007	13.0	N/A	N/A
ESB-07	4/19/2007	17.0	N/A	N/A

Note: (1) ESB-02 met refusal after three attempts.

Key:

bgs = below ground surface
 EMW = EPA monitoring well
 EPA = U.S. Environmental Protection Agency
 ESB = EPA soil boring
 ID = identification
 N/A = not applicable
 START = Superfund Technical Assessment and Response Team

<p align="center">Table 3-2</p> <p align="center">Summary of Free Product Observations in Soil Borings</p> <p align="center">2007 EPA Removal Assessment</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>				
EPA Boring ID	Installation Date	Total Depth (feet bgs)	Free Product Observations	
			Depth Interval (feet bgs)	Observation
EMW-01	4/16/2007	12.6	All	None.
EMW-02	4/17/2007	16.0	5 - 7	Moderately strong hydrocarbon odor.
			7 - 9	Hydrocarbon product.
EMW-03	4/17/2007	19.5	All	None.
EMW-04	4/17/2007	17	11 - 13	Hydrocarbon sheen on groundwater.
			13 - 17	Oily hydrocarbon product present on downhole tools (poor recovery in sampling tool).
EMW-05	4/18/2007	19.5	9 - 11	Strong hydrocarbon odor.
			11 - 13	Strong hydrocarbon odor and sheen.
			13 - 15	Strong hydrocarbon odor; sheen and drops of black product in groundwater.
EMW-06	4/18/2007	18.8	7 - 9	Hydrocarbon odor and sheen.
			9 - 11	Hydrocarbon odor and black oily liquid.
			11 - 13	Sand and gravel are stained black with an oily liquid.
			13 - 18	Soil cuttings contain an oily liquid.
ESB-01	4/18/2007	9.0	7 - 9	Hydrocarbon sheen and odor on groundwater.
ESB-02 ⁽¹⁾	4/18/2007	3, 5, 3 ⁽¹⁾	All	None.
ESB-03	4/18/2007	13.0	9 - 11	Slight hydrocarbon odor.
			11 - 13	Strong hydrocarbon odor, product.
ESB-04	4/18/2007	9.0	3 - 5	Hydrocarbon odor and sheen.
			5 - 7	Hydrocarbon odor.
			7 - 9	Strong hydrocarbon odor and product.
ESB-05	4/19/2007	25.0	3 - 5	Hydrocarbon odor and sheen.
			7 - 9	Strong hydrocarbon odor, light sheen.
			11 - 13	Very dense, black oily liquid with strong hydrocarbon odor.
			15 - 17	Hydrocarbon odor.
ESB-06	4/19/2007	13.0	7 - 9	Hydrocarbon odor.
			11 - 13	Strong hydrocarbon odor and oily liquid.
ESB-07	4/19/2007	17.0	5 - 7	Hydrocarbon odor.
			9 - 11	Increased hydrocarbon odor and sheen.
			13 - 15	Hydrocarbon odor and heavy sheen/product.
			15 - 17	Hydrocarbon odor and heavy sheen/product.

Note: (1) ESB-02 met refusal after three attempts.

Key:

bgs = below ground surface

EMW = EPA monitoring well

EPA = U.S. Environmental Protection Agency

ESB = EPA soil boring

ID = identification

<p align="center">Table 3-3</p> <p align="center">Summary of Groundwater and Free Product Level Data</p> <p align="center">2007 EPA Removal Assessment</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>						
Monitoring Well	Measurement Date	Reference Elevation	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation
EMW-01	4/21/2007	97.81	--	7.88	0.00	89.93
EMW-02	4/21/2007	97.52	--	8.22	0.00	89.30
EMW-03	4/21/2007	97.90	--	10.79	0.00	87.11
EMW-04	4/21/2007	98.14	--	11.31	0.00	86.83
EMW-05	4/21/2007	100.02	--	11.89	0.00	88.13
EMW-06	4/21/2007	99.15	--	10.79	0.00	88.36
HC-1R	4/21/2007	n/a	--	10.92	0.00	n/a
HC-4	4/17/2007	n/a	10.32	11.20	0.88	n/a
HC-5	4/21/2007	n/a	--	15.18	0.00	n/a
MW-5	4/21/2007	97.76	--	7.89	0.00	89.87
MW-11	4/21/2007	n/a	Present ⁽¹⁾	NA	Present ⁽¹⁾	n/a
TP-1 (2")	4/21/2007	n/a	--	16.80	0.00	n/a
TP-1 (4")	4/21/2007	n/a	--	16.61	0.00	n/a
TP-2	4/21/2007	n/a	12.48	13.20	0.72	n/a
TP-3	4/21/2007	n/a	--	19.92	0.00	n/a
TP-5	4/21/2007	n/a	--	13.57	0.00	n/a
TP-6	4/21/2007	n/a	--	12.57	0.00	n/a
TP-7	4/21/2007	n/a	--	14.17	0.00	n/a
TP-8	4/21/2007	n/a	--	14.84	0.00	n/a
TP-9	4/21/2007	n/a	--	15.58	0.00	n/a
TP-10	4/21/2007	n/a	--	5.42	0.00	n/a
TP-11	4/21/2007	n/a	--	5.41	0.00	n/a
TP-12	4/21/2007	n/a	--	12.54	0.00	n/a
EW-3	4/17/2007	n/a	Present ⁽¹⁾	NA	Present ⁽¹⁾	n/a
EW-4	4/17/2007	n/a	Present ⁽¹⁾	NA	Present ⁽¹⁾	n/a

Notes: (1) A very viscous and sticky product was present; depths and thickness were not determined.

Key:

MSL = mean sea level
n/a = not available
NM = not measured

**Groundwater Monitoring Data
2009 Potlatch/Golder Field Investigation**

TABLE 3-3
Monitoring Well Construction Details

Well ID	Well Type	Casing Diameter	Casing Construction	Measuring Point	Measuring Point Elevation (Feet amsl)	Depth to Bottom of Well (Feet BMP)	Top of Screen Interval (Feet BGS)	Top of Screen Elevation (Feet amsl)	Bottom of Screen Interval (Feet BGS)	Bottom of Screen Elevation (Feet amsl)
Monitoring Wells										
GA-1	Flush Mount	2-inch	PVC	Top of casing.	2478.19	21	6	2472.19	21	2457.19
GA-2	Flush Mount	2-inch	PVC	Top of casing.	2472.74	20.1	5.1	2467.64	20.1	2452.64
GA-3	Flush Mount	2-inch	PVC	Top of casing.	2479.23	26.5	11.5	2467.73	26.5	2452.73
GA-4	Flush Mount	2-inch	PVC	Top of casing.	2474.21	21	6	2468.21	21	2453.21
EMW-01	Flush Mount	2-inch	PVC	Top of casing.	2478	12.6	2.5	2475.50	12.6	2465.4
EMW-02	Flush Mount	2-inch	PVC	Top of casing.	2477.82	16	6	2471.82	16	2461.82
EMW-03	Flush Mount	2-inch	PVC	Top of casing.	2478.1	19	9	2469.10	19	2459.1
EMW-04	Flush Mount	2-inch	PVC	Top of casing.	2478.33	17	7.0	2471.33	17	2461.33
EMW-05	Flush Mount	2-inch	PVC	Top of casing.	2480.24	19.5	9.5	2470.74	19.5	2460.74
EMW-06	Flush Mount	2-inch	PVC	Top of casing.	2479.36	18.5	8.5	2470.86	18.5	2460.86
EW-3	Stick-up	3-foot	Currogated Metal	Top of casing/monument.	2478	15.75				
EW-4	Stick-up	3-foot	Currogated Metal	Top of casing/monument.	2479.43	15.5				
EW-?	Stick-up	3-foot	Currogated Metal	Top of casing/monument.	2483.43					
MW-5	Flush Mount	2-inch	PVC	Top of casing.	2478.06	12.9				
MW-11	Stick-up	2-inch	PVC	Top of casing.	2484.28	~22				
HC-4	Flush Mount	4-inch	PVC	Top of casing.	2483.01	15.93	9.25	2473.76	18.5	2464.51
HC-1R	Flush Mount	2-inch	PVC	Top of casing.	2477.81	18	9	2468.81	18	2459.81
DW-01	Stick-up	6-inch	Steel.	Top of casing.	2475.91	~68				
Stick-Up Pipes										
#1010	Stick-up	4-inch	PVC	Top of casing	2481.82	15.34				
#1002	Stick-up	4-inch	PVC	Top of casing	2482.21	14.9				
#1006	Stick-up	1.5-inch	PVC	Top of casing	2484.63	23.05				
#1005	Stick-up	4-inch	PVC	Top of casing	2483.13	17.1				
#1007	Stick-up	4-inch	PVC	Top of casing	2481.56	15.2				
#1014	Stick-up	4-inch	PVC	Top of casing	2485.18	20.85				
#1015	Stick-up	2-inch	PVC	Top of cap	2485.23	---				
Black Pipe	Stick-up	2-inch	PVC	Top of cap	2483.58	---				
#1030	Stick-up	4-inch	PVC	Top of casing	2482.69	17.43				
#1031	Stick-up	4-inch	PVC	Top of casing	2482.63	18				
#1025	Stick-up	4-inch	PVC	Top of casing	2483.31	19.12				
#1024	Stick-up	4-inch	PVC	Top of casing	2482.98	16.78				
#1023	Stick-up	4-inch	PVC	Top of casing	2483.89	16.94				
#1012	Stick-up	4-inch	PVC	Top of casing.	2483.01	15.93				
Piezometer	Stick-up	3/4-inch	PVC.	Top of casing.	2484.16	9.5	N/A		N/A	N/A

Note: **Bold** - Surveyor indicated TOC elevation for EMW-06 required +3.73 foot correction.

TABLE 3-4a
Groundwater Level Measurements - September 2009

ID	Time	Date	Water Level (Feet BTOC)	TOC Elevation (Feet AMSL)	Water Elevation (Feet AMSL)	LNAPL Level (Feet BTOC)	LNAPL Thickness (Feet)	LNAPL Corrected Water Level	Odor/Sheen
<i>Monitoring Wells</i>									
GA-1	10:04	9/1/2009	13.6	2478.19	2464.59	13.59	0.01	2464.60	Probe coated in oil like product.
GA-2	9:35	9/1/2009	8.62	2472.74	2464.12	---	---		
GA-3	9:45	9/1/2009	15.92	2479.23	2463.31	---	---		
GA-4	9:24	9/1/2009	9.81	2474.21	2464.40	---	---		
EMW-01	12:43	9/1/2009	10.2	2478.00	2467.80	---	---		
EMW-02	15:01	9/1/2009	10.81	2477.82	2467.01	---	---		Slight odor.
EMW-03	10:31	9/1/2009	13.32	2478.10	2464.78	---	---		
EMW-04	10:46	9/1/2009	13.63	2478.33	2464.70	---	Thin Layer		Probe coated in oil like product.
EMW-05	11:02	9/1/2009	14.68	2480.24	2465.56	---	---		
EMW-06	12:09	9/1/2009	13.89	2479.36	2465.47	13.65	0.24	2465.69	Probe coated in oil and diesel like product.
EW-3	13:39	9/1/2009	12.18	2478.00	2465.82	---	---		
EW-4	13:46	9/1/2009	12.85	2479.43	2466.58	---	---		Sheen on water.
MW-5	12:54	9/1/2009	10.99	2478.06	2467.07	---	---		
MW-11	11:45	9/1/2009	N/A	2484.28	---	17.3			Probe coated in oil like product.
HC-4	---	---	NS	NS	---	---	---		
HC-1R	14:38	9/1/2009	13.23	2477.81	2464.58	---	---		
DW-01	9:54	9/1/2009	11.54	2475.91	2464.37	---	---		
EW-?	16:33	9/4/2009	18.05	2483.43	2465.38	---	---		
<i>Stick-up Pipes</i>									
#1002	10:10	9/9/2009	Dry	2482.21	---	---	---		
#1005	10:07	9/9/2009	16.55	2483.13	2466.58	---	---		
#1006	10:00	9/9/2009	18.1	2484.63	2466.53	---	---		Probe smells like petroleum.
#1007	9:56	9/9/2009	14.7	2481.56	2466.86	---	---		
#1010	16:46	9/4/2009	Dry	2481.82	---	15.34	Thin Layer		Oil like product at bottom of well.
#1012	14:00	9/1/2009	Dry	2483.01	---	---	---		
#1014	16:41	9/4/2009	19.55	2485.18	2465.63	---	---		
#1015	16:43	9/4/2009	Dry	2485.23	---	---	---		
#1023	16:25	9/4/2009	Dry	2483.89	---	---	---		
#1024	16:23	9/4/2009	Dry	2482.98	---	---	---		
#1025	16:19	9/4/2009	18.29	2483.31	2465.02	---	---		
#1030	16:16	9/4/2009	Dry	2482.69	---	---	---		
#1031	16:12	9/4/2009	17.43	2482.63	2465.20	---	---		
Black Pipe	16:30	9/4/2009	N/A	2483.58	---	---	---		
Piezometer	15:49	9/1/2009	Dry	2484.16	---	---	---		

Notes: Dry - At the time of measurement, the well did not contain any water.
N/A - Water level not measured in this well due to extenuating circumstances.
NS - could not be located in September 2009 so it was not included in the geodetic survey.
* Could not determine LNAPL thickness due to presence of drop tube in well.
LNAPL Corrected Water Level Calculation = Water Level + (LNAPL thickness x 0.90 specific gravity of LNAPL)
Bold - Surveyor indicated TOC elevation for EMW-06 required +3.73 foot correction.

TABLE 3-4b
Groundwater Level Measurements - November 2009

ID	Time	Date	Water Level (Feet BTOC)	TOC Elevation (Feet AMSL)	Water Elevation (Feet AMSL)	LNAPL Level (Feet BTOC)	LNAPL Thickness (Feet)	LNAPL Corrected Water Level	Odor/Sheen
<i>Monitoring Wells</i>									
GA-1	13:00	11/19/2009	13.72	2478.19	2464.47	---	---		
GA-2	7:45	11/19/2009	8.77	2472.74	2463.97	---	---		
GA-3	8:00	11/19/2009	16.07	2479.23	2463.16	---	---		
GA-4	7:32	11/19/2009	9.94	2474.21	2464.27	---	---		
EMW-01	8:15	11/19/2009	10.31	2478.00	2467.69	---	---		
EMW-02	11:45	11/19/2009	10.84	2477.82	2466.98	---	---		
EMW-03	11:40	11/19/2009	13.43	2478.10	2464.67	---	---		
EMW-04	12:00	11/19/2009	13.66	2478.33	2464.67	*	---		
EMW-05	13:05	11/19/2009	14.81	2480.24	2465.43	---	---		
EMW-06	12:40	11/19/2009	13.63	2479.36	2465.73	*	---		
EW-3	15:40	11/19/2009	12.13	2478.00	2465.87	---	---		
EW-4	14:42	11/19/2009	12.81	2479.43	2466.62	---	---		
MW-5	12:35	11/19/2009	11.70	2478.06	2466.36	---	---		
MW-11	9:20	11/19/2009	---	2484.28	---	---	3.73 (ft from bottom of well)		
HC-4	8:30	11/19/2009	14.44	NS	---	13.20	1.24		
HC-1R	15:20	11/19/2009	13.35	2477.81	2464.46	---	---		
DW-01	10:50	11/19/2009	11.62	2475.91	2464.29	---	---		
<i>Stick-up Pipes</i>									
#1007	15:35	11/19/2009	14.68	2481.56	2466.88	---	---		Slight petroleum-like odor noted.
#1010	11:25	11/19/2009	---	2481.82	---	15.95	---		Could not determine depth to water due to presence of viscous oil.
Piezometer	15:50	11/19/2009	dry	2484.16	---	---	---		

Notes: * Could not determine LNAPL thickness due to presence of drop tube in well.
NS - could not be located in September 2009 so it was not included in the geodetic survey.
LNAPL Corrected Water Level Calculation = Water Level + (LNAPL thickness x specific gravity of LNAPL)
Bold - Surveyor indicated TOC elevation for EMW-06 required +3.73 foot correction.

TABLE 3-5
Water Quality Parameters

Sample Location ID	Date	Time	pH	Temperature (°C)	Specific Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Notes
Groundwater Samples								
GA-1	9/5/2009	9:21	6.67	10.7	348	0.04	1.73	Purge water had petroleum-like odor and a sheen.
GA-2	9/2/2009	12:01	6.98	11.4	167.9	0.09	4.69	
GA-3	9/3/2009	9:23	7.06	14	101.7	0.06	0.81	
GA-4	9/2/2009	14:20	6.74	11.6	201.9	1.96	1.75	
EMW-04	9/4/2009	15:25	6.69	11.9	285.6	0.06	0.76	Purge water had petroleum-like odor and a sheen.
EMW-05	9/5/2009	11:13	6.76	10.8	228.8	0.08	0.18	Purge water had medium strength petroleum-like odor.
EMW-06	9/5/2009	13:18	6.66	12.6	213	0.06	0.28	Purge water had slight petroleum-like odor and a sheen.
EW-3	9/4/2009	10:55	6.17	12.5	164.9	0.08	7.02	Turbidity fluctuated throughout duration of purge from 6.24 - 7.19 NTU.
EW-4	9/4/2009	13:07	6.28	13.7	163.9	0.06	4.45	
MW-5	9/2/2009							Not able to monitor water quality parameters due to limited water volume in well. Sample was turbid.
HC-1R	9/4/2009	8:50	6.45	10.3	287.8	0.06	3.51	
DW-01	9/2/2009	18:39	6.99	9.1	240.7	0.16	97	Turbidity consistent around 100 NTU for 40 minutes.
Surface Water Samples								
RS-1	9/6/2009	10:31	7.68	12.5	61.8	9.64	0.74	
RS-2	9/6/2009	10:45	7.33	14.3	58.7	9.75	0.46	
RS-3	9/6/2009	11:30	7.79	15	69.8	9.92	0.54	
RS-4	9/6/2009	13:19	7.35	14.7	75.3	8.48	4.52	
RS-5	9/6/2009	13:57	7.15		85.2	8.65	1.32	
RS-6	9/6/2009	14:46	7.04	15.9	83.8	8.00		
RS-7	9/6/2009	15:20	7.45	16.7	80.8	7.04	1.32	
RS-8	9/6/2009	16:19	7.67	16.3	16.9	8.33	1.32	

TABLE 3-8
Hydraulic Test Measurements

Well ID	Well Depth (ft)	Depth to Water (ft)	Saturated Aquifer Thickness (ft)	Hydraulic Conductivities			
				Slug "In" (ft/day)		Slug "Out" (ft/day)	
				Hvorslev	Bouwer-Rice	Hvorslev	Bouwer-Rice
EMW-01	12.6	10.25	2.35	0.64	0.31		
EMW-02	16	10.92	5.08	1.74	1.13		
EMW-05	19.5	14.8	4.7	0.85	0.52		
HC-1R	18	13.33	4.67	5.16			
GA-2	20.1	8.62	11.48	3.59	2.53	0.82	0.60
GA-3	26.5	15.96	10.54	1.56	1.12	2.72	2.00
GA-4	21	9.87	11.13	3.13	2.25		

Note: Saturated aquifer thickness determined by subtracting water depth from well depth.

TABLE 3-11
Stream Gauge Measurements

Date	Time	Gauge Reading (ft.)	Water Elevation (ft amsl)
9/9/2009	15:09	0.8	2466.26
10/2/2009	13:40	0.68	2466.14
10/11/2009	11:05	0.64	2466.1
10/17/2009	11:25	0.70	2466.16
10/24/2009	8:45	1.00	2466.46
11/2/2009	8:13	0.82	2466.28
11/7/2009	9:00	0.92	2466.38
11/19/2009	15:50	0.68	2466.14

Note: Surveyed measuring point is the 8 foot mark on the stream gauge
(2473.46 ft. amsl)

Avery Landing Slug Test Analysis

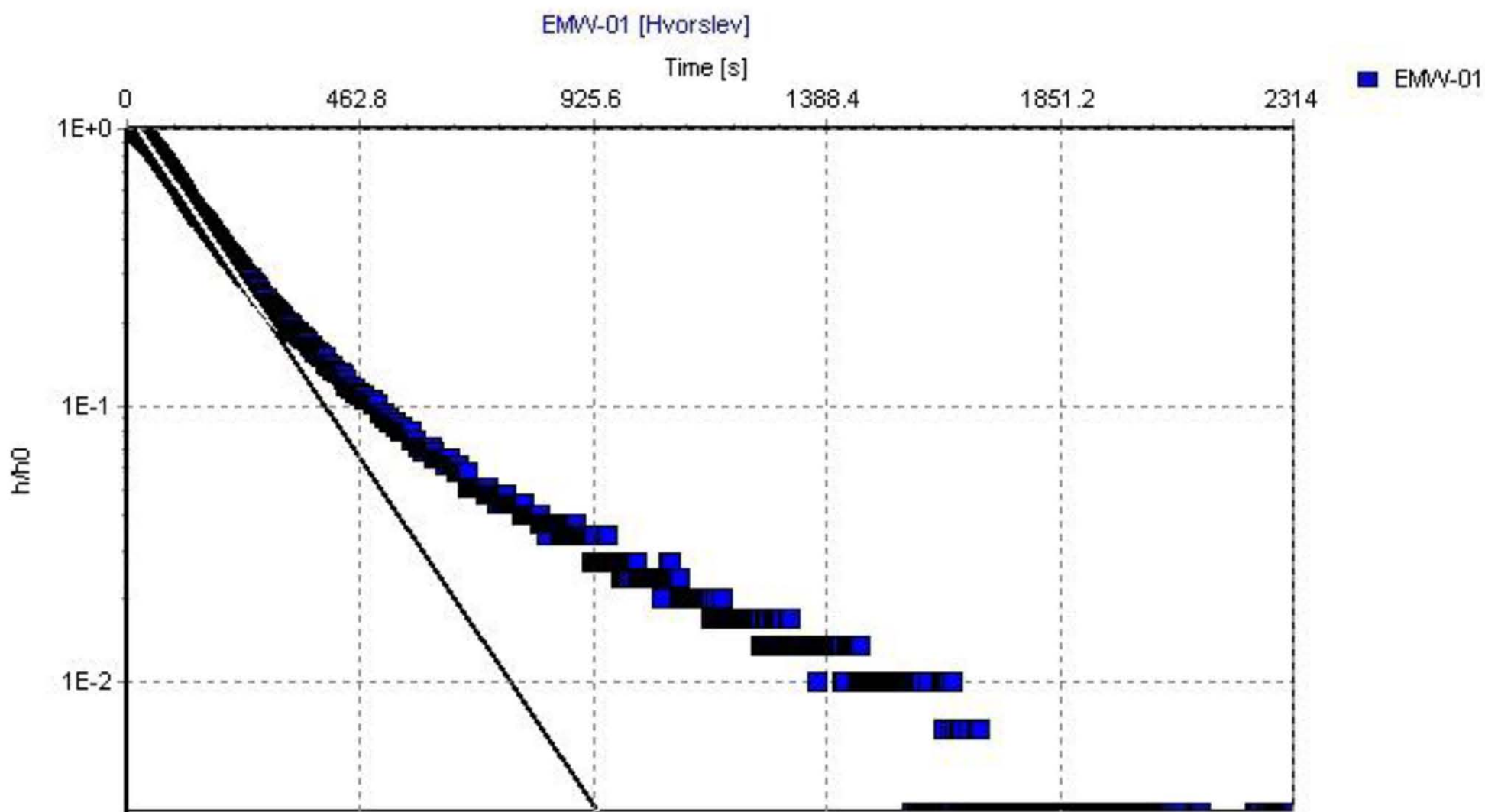
Hydraulic conductivities were calculated using both the Bouwer-Rice and Hvorslev methods for comparison using Aquifer Test. The curve fit used for both the Hvorslev and Bouwer-Rice were the same for each well and can be viewed below. The saturated aquifer thickness for each analysis was assumed to be the amount of water in the well. This was used because many of the water levels were below the top of the screen/filter pack. Saturated aquifer thickness was calculated by subtracting the depth to water from the total well depth (see chart below). I calculated hydraulic conductivities for the slug out for the wells where the Golder slug (not water) was used.

Overall the total range in hydraulic conductivities was 0.31 ft/day to 5.16 ft/day, however the h/h_0 vs. time plot for HC-1R, the highest hydraulic conductivity, has noticeable dip at approximately t_{50} so the analysis may not be as accurate. Without considering HC1R, K values range from 0.31 ft/day to 3.59 ft/day.

Spatially, the highest hydraulic conductivities were at GA-2, GA-3 and GA-4 located on the western end of the property with the highest hydraulic conductivities measured at GA-2 and GA-4. The wells on the eastern end of the property had lower hydraulic conductivities ranging from 0.31 ft/day (EMW-01) to 1.74 ft/day (EMW-02).

<u>Well Details</u>			
<u>Well ID</u>	Well Depth (ft)	Depth to Water (ft)	Saturated Aquifer Thickness = well depth - depth to water (ft)
EMW-01	12.6	10.25	2.35
EMW-02	16	10.92	5.08
EMW-05	19.5	14.8	4.7
HC-1R	18	13.33	4.67
GA-2	20.1	8.62	11.48
GA-3	26.5	15.96	10.54
GA-4	21	9.87	11.13

<u>Hydraulic Conductivities</u>				
<u>Well ID</u>	<u>Slug In (ft/day)</u>		<u>Slug Out (ft/day)</u>	
	Hvorslev	Bouwer-Rice	Hvorslev	Bouwer-Rice
EMW-01	0.64	0.31		
EMW-02	1.74	1.13		
EMW-05	0.85	0.52		
HC-1R	5.16			
GA-2	3.59	2.53	0.82	0.60
GA-3	1.56	1.12	2.72	2.00
GA-4	3.13	2.25		

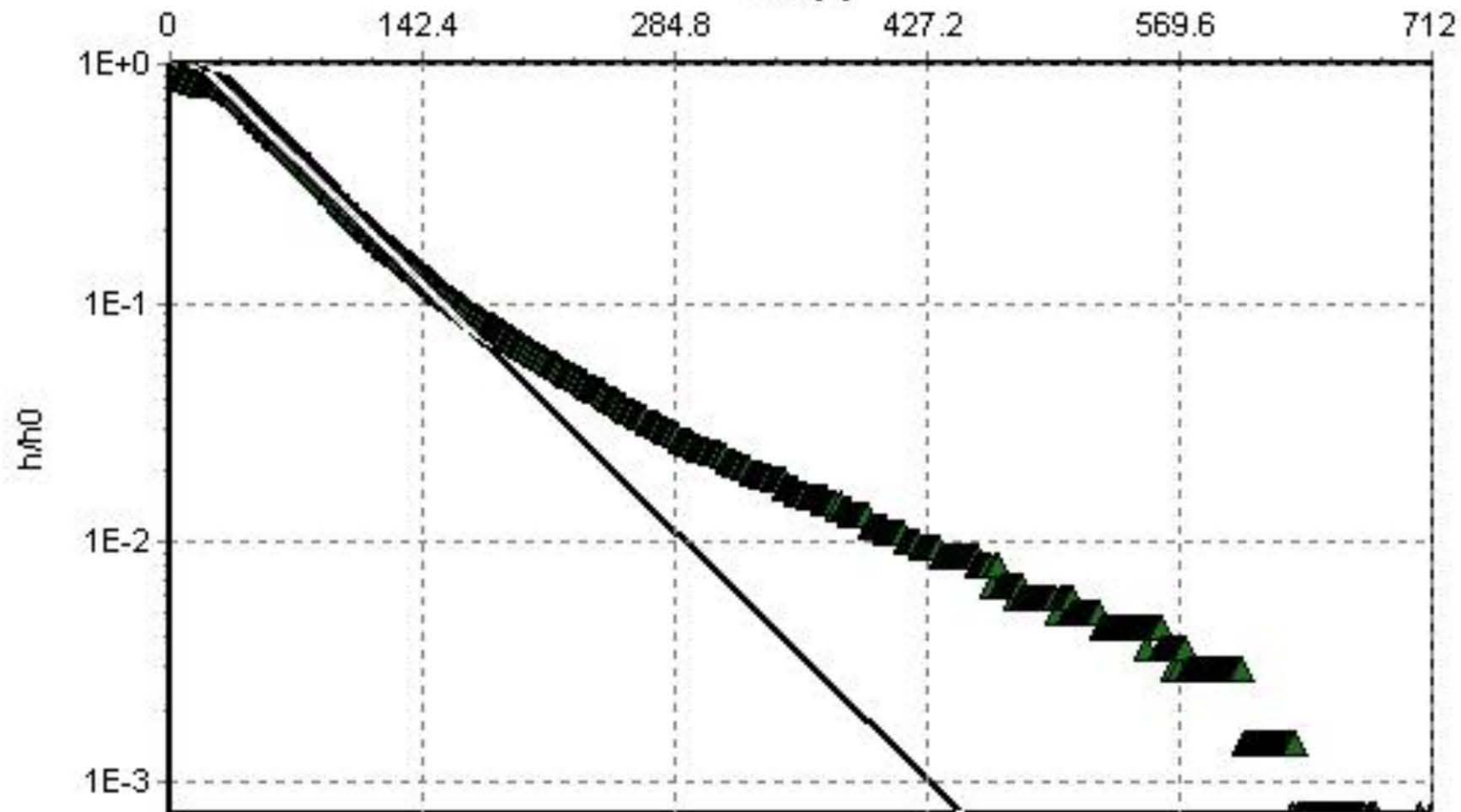


Conductivity: 6.40E-1 ft/d

EMW-02 [Hvorslev]

Time [s]

▲ EMW-02

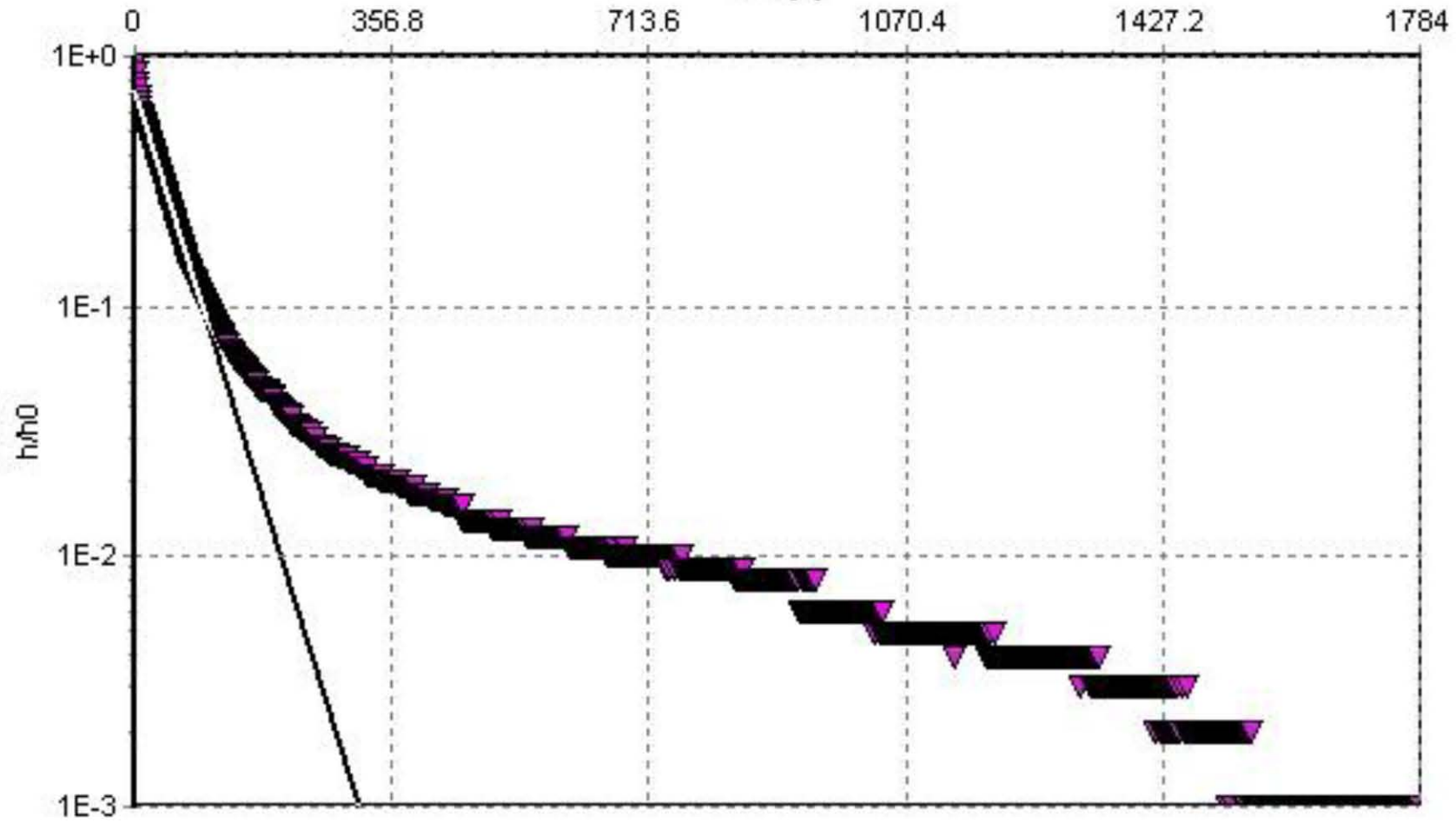


Conductivity: $1.74E+0$ ft/d

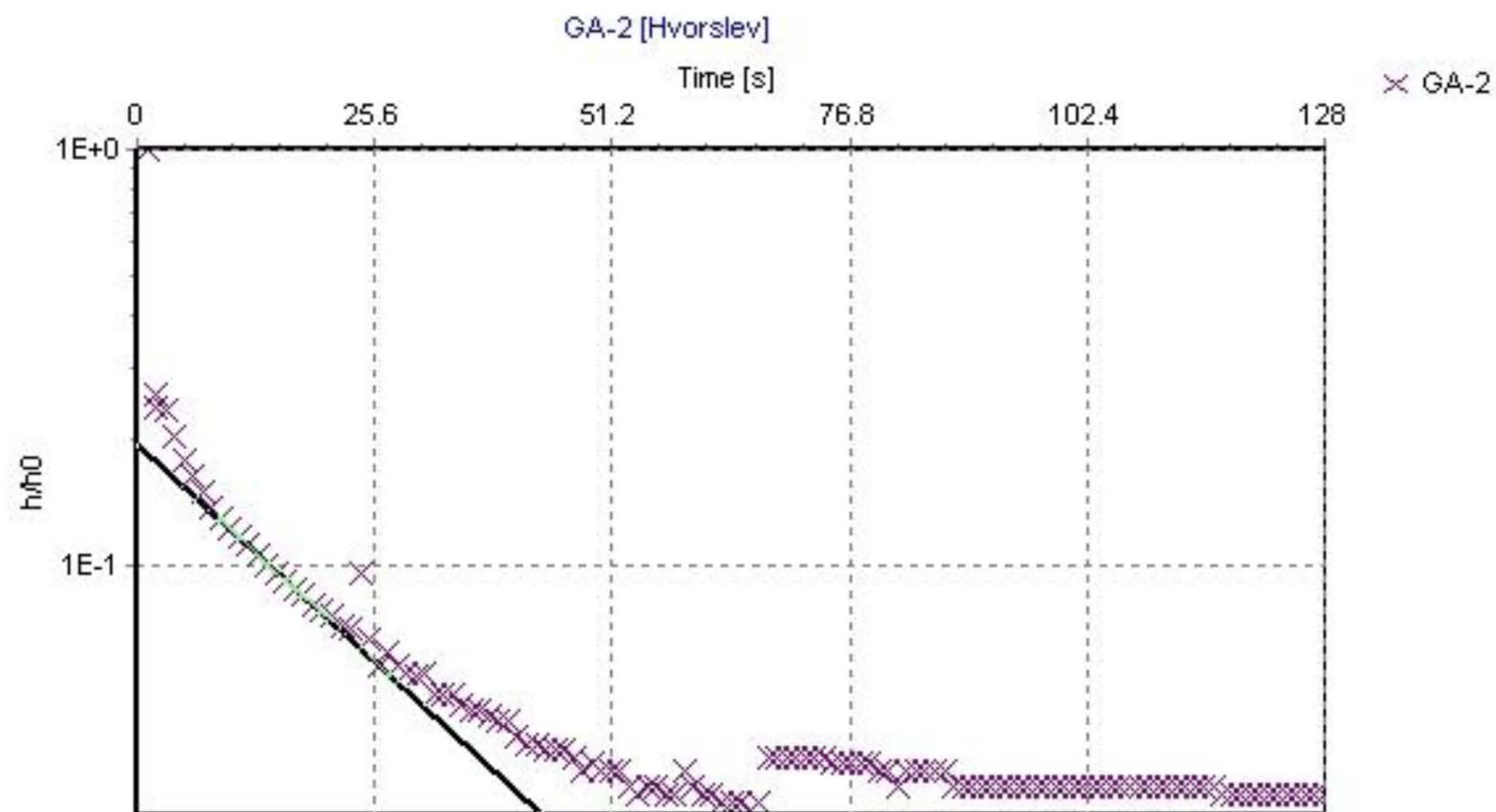
EMW-05 [Hvorslev]

Time [s]

▼ EMW-05



Conductivity: $8.47E-1$ ft/d

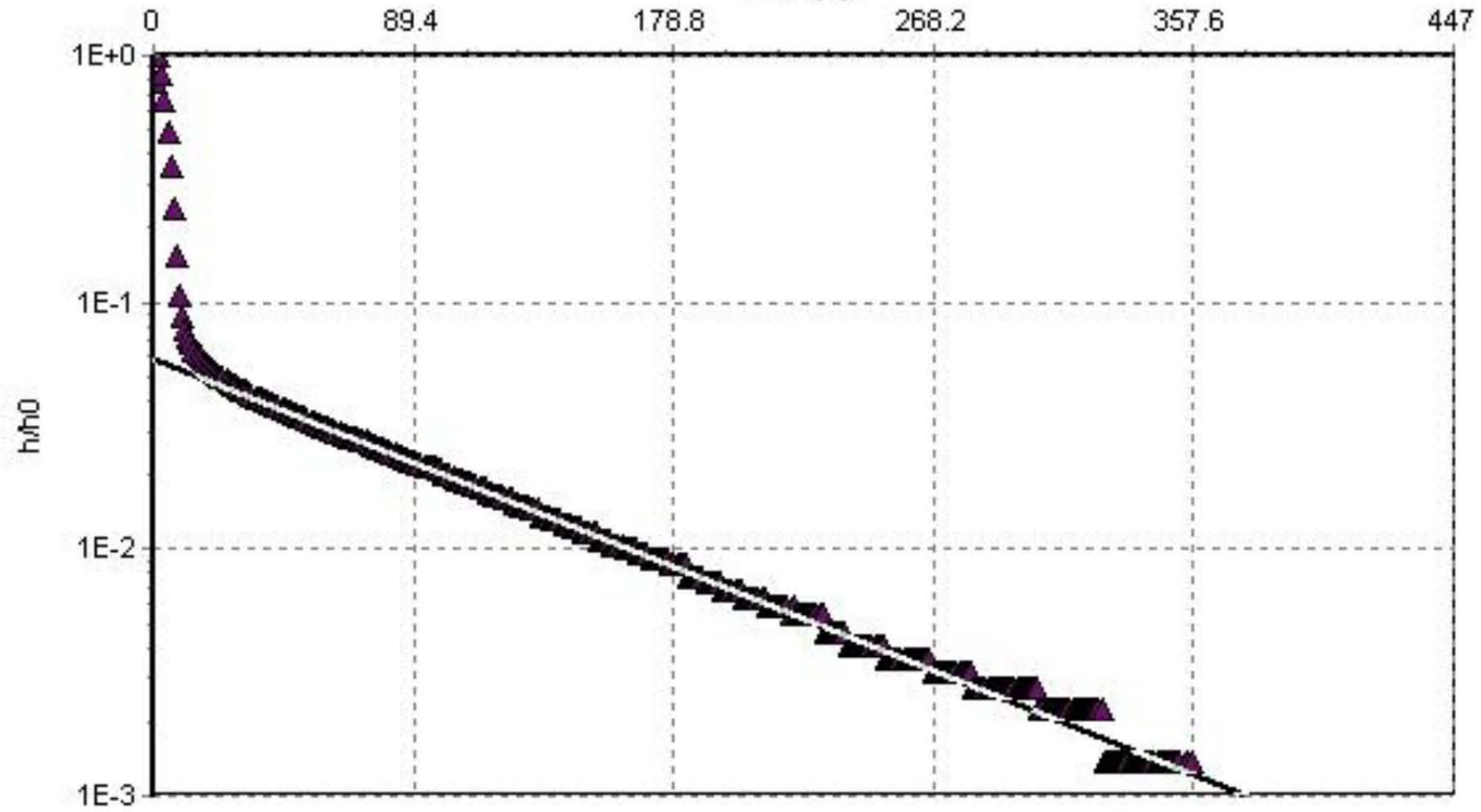


Conductivity: 3.59E+0 ft/d

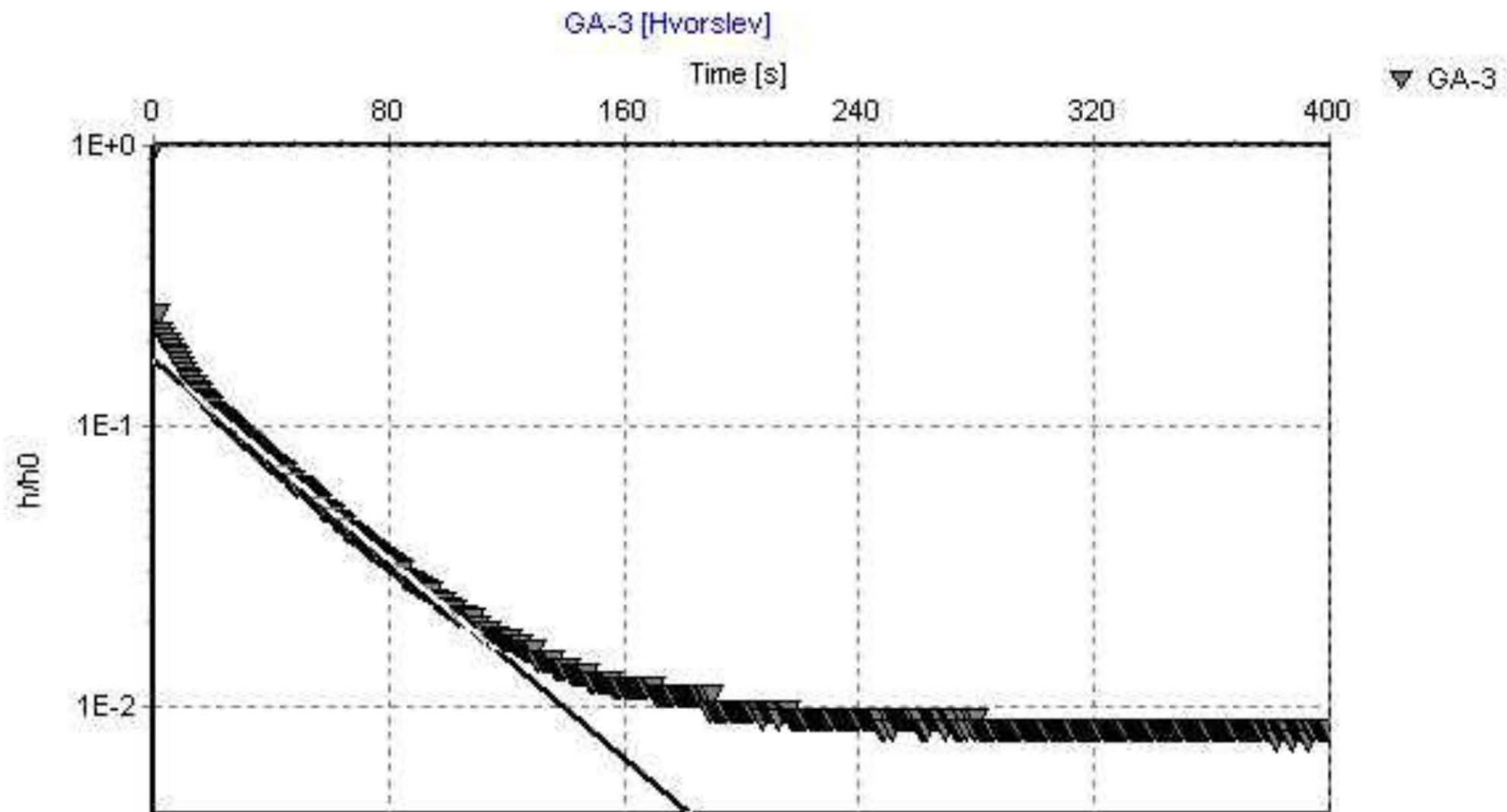
GA-2 Slug Out [Hvorslev]

Time [s]

▲ GA-2



Conductivity: $8.21E-1$ ft/d

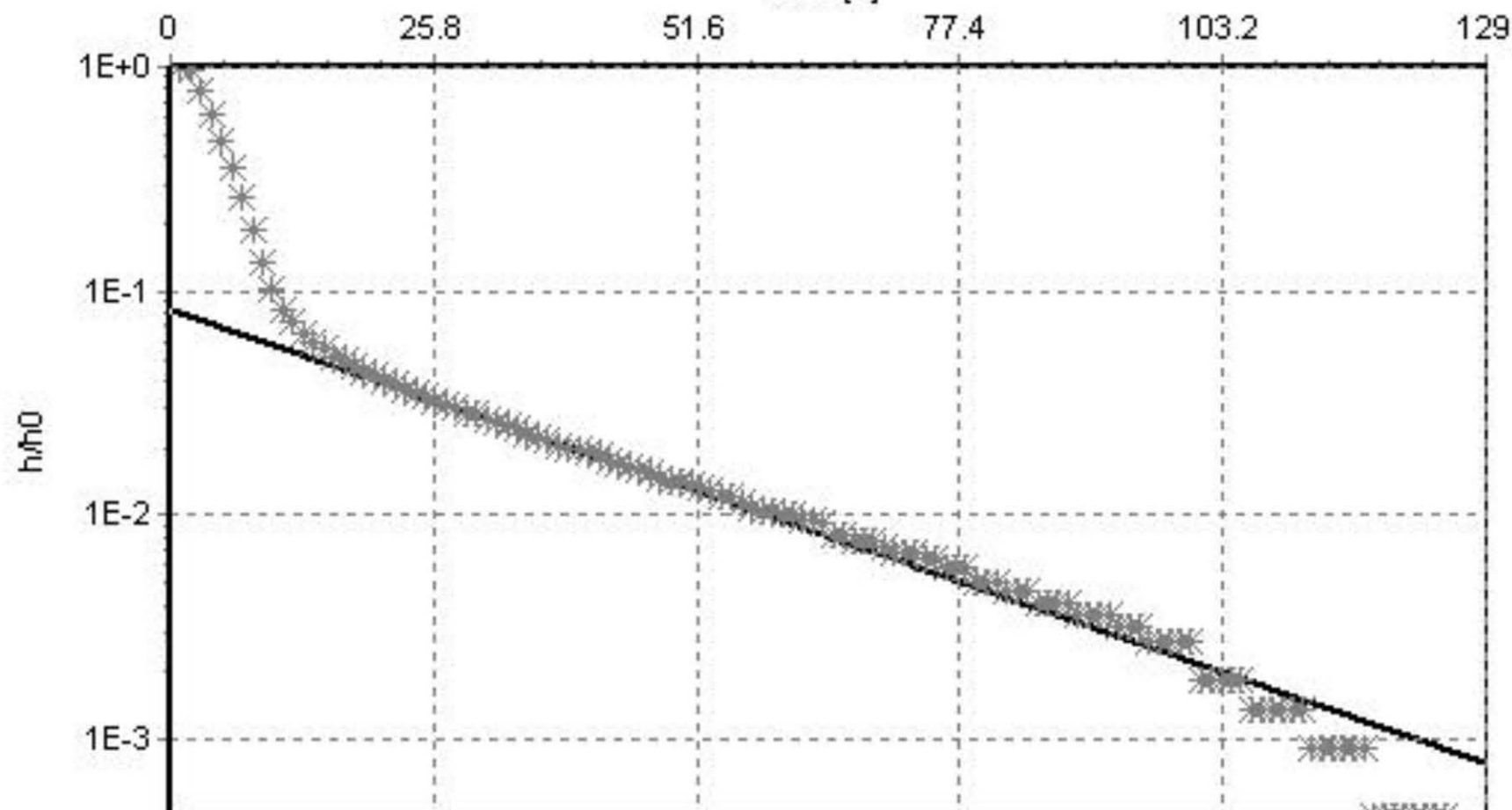


Conductivity: 1.56E+0 ft/d

GA-3 Slug Out [Hvorslev]

Time [s]

* GA-3

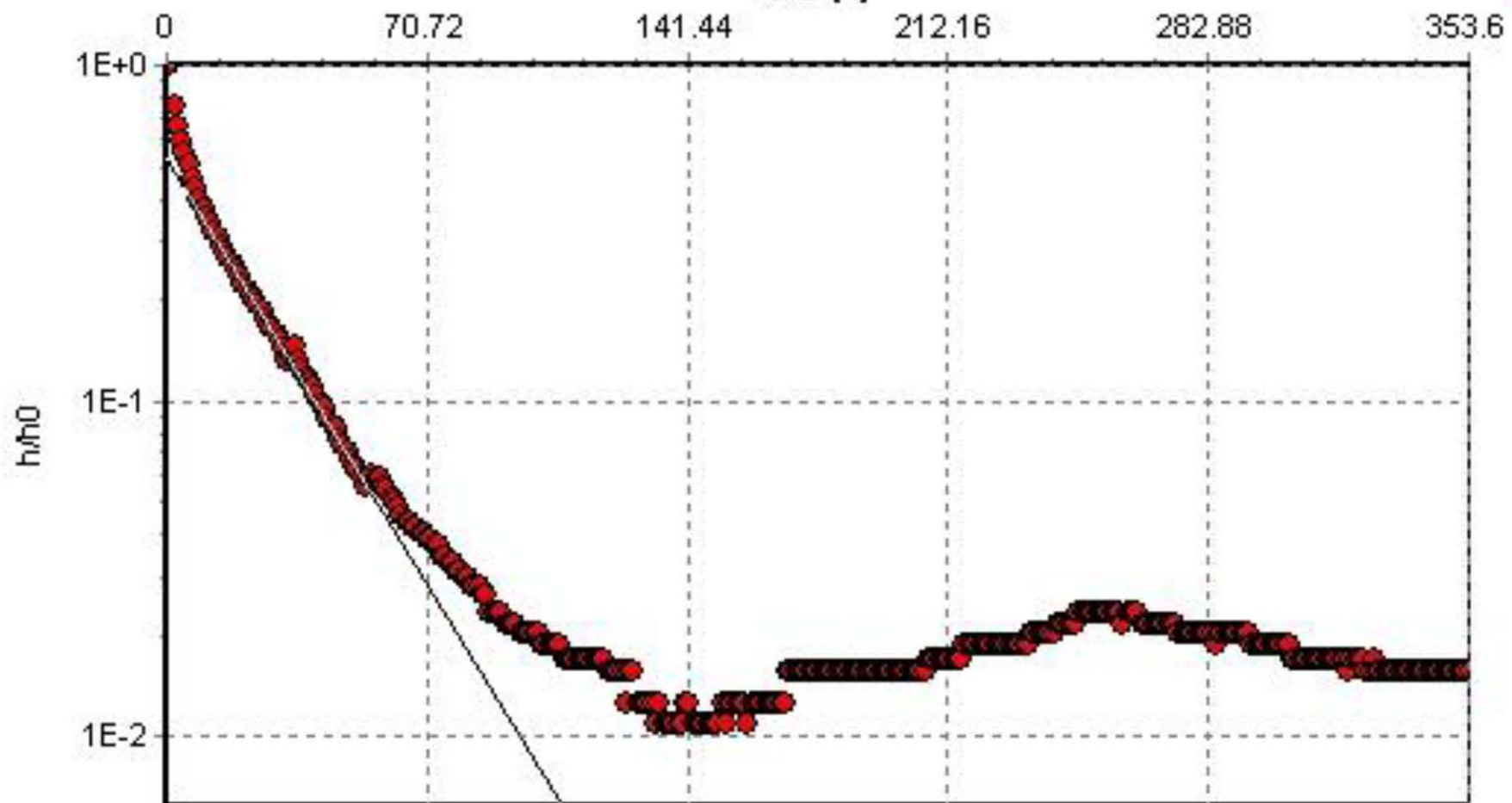


Conductivity: 2.72E+0 ft/d

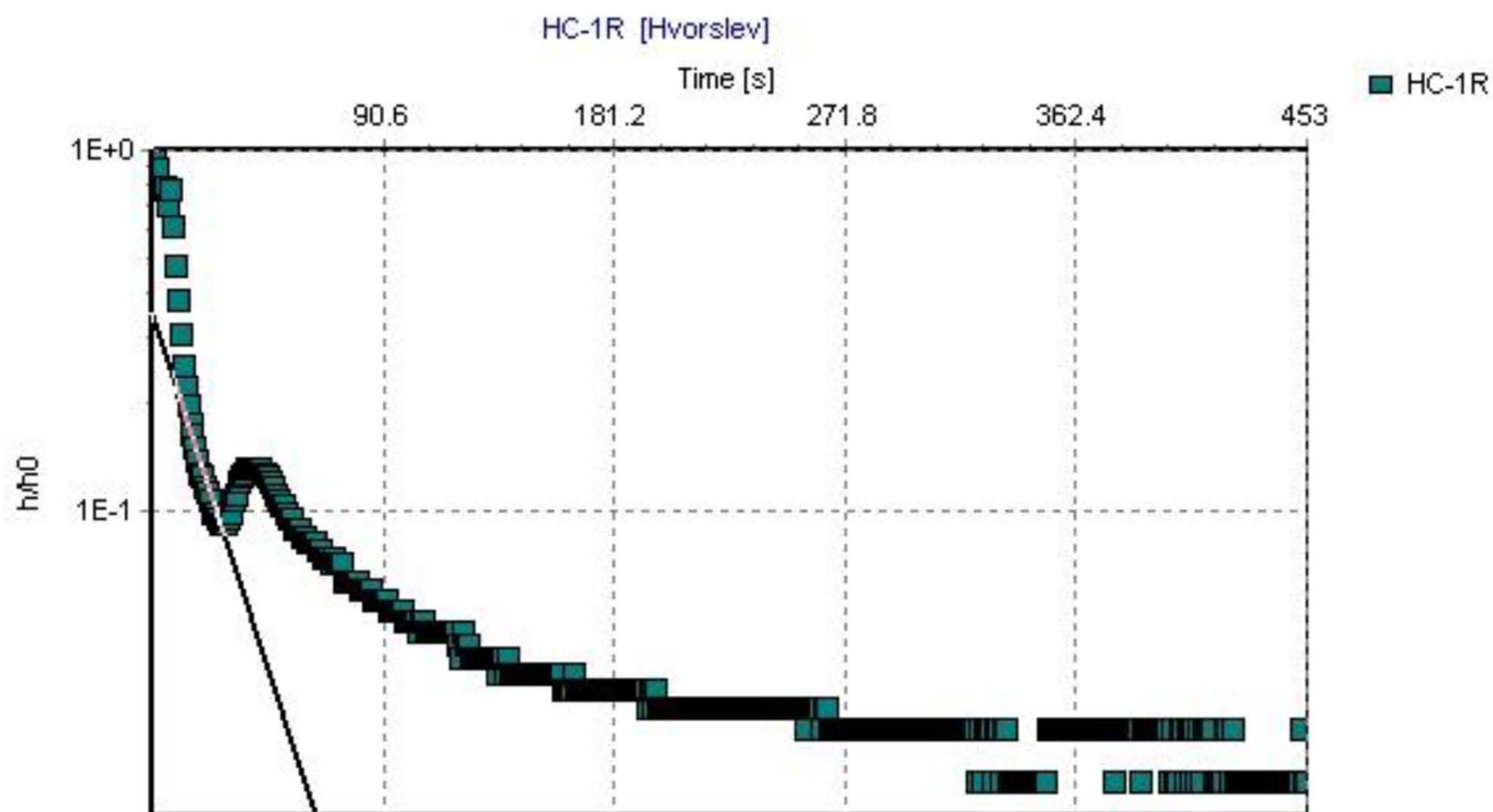
GA-4 [Hvorslev]

Time [s]

GA-4



Conductivity: $3.13E+0$ ft/d



Conductivity: 5.16E+0 ft/d

B

Borehole Logs from 2007 EPA Removal Assessment and 2009 Potlatch Field Investigation

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Borehole Logs
2007 EPA Removal Assessment

DRILLING LOG OF WELL/BORING NO. ESB 01

Page 1 of 1

DATE DRILLED: 4/18/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: N/A
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation				ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1				Not Sampled.				
2								
3								
4								
5				5.0				
6				WELL GRADED SAND WITH GRAVEL. Moderate brown, dry, dense, medium to very coarse grained sand with fractured gravel and some silt.		4 5 5 7	0.5	
7								
8						12 15 9 14	1.4	
9				9.0				Hydrocarbon odor and sheen on groundwater
10								
11								
12								
13								
14								
15								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: ESB 01

DRILLING LOG OF WELL/BORING NO. ESB 02

Page 1 of 1

DATE DRILLED: 4/18/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: N/A
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation				ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1				Not Sampled.				
1.0								
2								
2			SPG	WELL GRADED GRAVELLY SAND (SPG) Medium brown, dry, dense, medium to very coarse grained sand with gravel, cobbles and burnt wood fragments.			1.0	Began drilling at 2:05:00 PM. Auger was refused at the first location at a depth of 3.0 feet. Relocated 3.0' to the East. Auger was refused at 5.0'. A third attempt was refused at 3.0'
3								
3.0								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: ESB 02

DRILLING LOG OF WELL/BORING NO. ESB 03

Page 1 of 1

DATE DRILLED: 4/18/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: N/A
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation				ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1				Not Sampled.				
2								
3				3.0				
4				WELL GRADED SAND WITH GRAVEL. Medium brown, dry, very dense, medium to coarse grained sand with fractured gravel.			1.0	
5								
6						12 13 31 18	0.7	
7								
8						10 13 20 Ref	IR <0.3'	Insufficient recovery.
9								
10				10.0		12 13 16 18	IR <0.3'	Slight hydrocarbon odor. Insufficient recovery.
11				POORLY GRADED SAND (SP) Tan to gray, dry to moist (wet at depths greater than 11.5'), dense, medium grained sand with laminae of silt, increasing silt with depth.				
12						1 2 5 9	IR <0.3'	Strong hydrocarbon odor. Product present. Insufficient recovery.
13				13.0				
14								
15								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: ESB 03

Page 1 of 1

PROJECT NAME: Avery Landing
PROJECT LOCATION: Avery, Idaho
SSID #: 10ZZ

EPA TASK MANAGER: Earl Liverman
TDD #: 07-03-0004
START PROJECT #: 002233.0193.01SF
START PROJ MGR: Steve Hall

ENE:START WELL LOG B (AVER Y) START_AVERY3.GPJ E&E PORTLAND.GDT 7/31/07

PROJECT NAME: Avery Landing
WELL NO.: ESB 04

DRILLING LOG OF WELL/BORING NO. ESB 05

Page 1 of 2

DATE DRILLED: 4/19/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: N/A
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation				ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1				Not Sampled.				
2								
3				3.0				
4			SWG	WELL GRADED SAND WITH GRAVEL (SWG) Black to gray, moist, dense, medium to very coarse grained sand with fractured gravel.		6 6 12 22	0.7	Hydrocarbon odor and sheen.
5								
6						15 9 8 10	0.8	
7				7.5				
8			MLS	SANDY SILT (MLS) Gray, moist, medium stiff, moderate plasticity, silt with fine grained sand.		6 4 2 2	1.5	Strong hydrocarbon odor and slight sheen.
9								
10			SW	WELL GRADED SAND (SW) Brown to black, wet, very dense, medium to very coarse sand.		2 5 13 16	1.7	
11				11.0				
12			SWG	WELL GRADED GRAVELLY SAND (SWG) Brown to black, wet, very dense, medium to very coarse sand with gravel.		17 15 25 50	1.5	Black oily liquid with strong hydrocarbon odor.
13								
14						10 4 17 18	1.2	
15								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: ESB 05

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
16			SWG	16.0		5 13 17 15	1.2	
17			SWG	WELL GRADED GRAVELLY SAND WITH SILT (SWG) Light to dark gray, dry to moist, dense, fine to coarse silty sand with fine gravel and rounded cobbles.		8 18 17 5	1.0	Hydrocarbon odor with no product due to increased silt content.
18			MLS	18.5				
19			MLS	19.0				No hydrocarbon sheen or odor.
20			SW-SM	WELL GRADED SILTY SAND WITH GRAVEL (SW-SM) Light brown, dry to moist, dense, fine to mostly coarse sand with rounded gravel and silt.		15 19 22 17	1.3	No hydrocarbon sheen or odor.
21						11 19 25 20	1.0	No hydrocarbon sheen or odor.
22								
23						13 18 23 25	1.1	
24				25.0				
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



DRILLING LOG OF WELL/BORING NO. ESB 06

Page 1 of 1

DATE DRILLED: 4/19/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: N/A
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation				ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1				Not Sampled.				
2								
3				3.0				
4				SILTY SAND WITH GRAVEL. Light brown, dry, medium dense, fine sand to silt with fractured gravel and fragments of cinder and brick.		30 18 5 20	1.0	
5								
6								
7								
8				7.5				
9				SANDY SILT (MLS) Olive gray, moist, medium stiff, moderate plasticity, sandy silt.		8 12 14 15	0.4	Hydrocarbon odor.
10								
11								
12				11.5				
13				WELL GRADED SAND (SW) Dark gray, wet, medium dense, fine to coarse sand.		2 3 6 16	1.5	Strong hydrocarbon odor. Oily liquid present.
14				13.0				
15								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: ESB 06

DRILLING LOG OF WELL/BORING NO. ESB 07

Page 1 of 2

DATE DRILLED: 4/19/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: N/A
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall



ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation				ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1				Not Sampled.				
2								
3				3.0				
4			FILL	POORLY GRADED SAND. Black, dry, medium dense, very coarse grained sand and cinder.		8 12 13 9	1.2	
5				5.5				
6			MLS	SANDY SILT (MLS) Olive gray, moist to dry, stiff, medium plasticity, fine sand and silt with occasional gravel.		8 20 12 10	1.1	Hydrocarbon odor.
7						7 7 5 7	1.2	
8								
9				9.0				
10				*** Sampler blocked by wood Fragments ***		4 6 12 17	0.8	Hydrocarbon odor and sheen.
11						7 7 5 6	?	Black wood fragments possibly stained by hydrocarbons.
12								
13								
14				14.0		9 12 13 12	0.8	Hydrocarbon odor and heavy sheen.
15			GW					

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: ESB 07

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
16			GW	WELL GRADED GRAVEL (GW) Light to dark gray, moist to wet, medium dense, fine to coarse fractured gravel with silt and fine sand. <i>(continued)</i>			1.0	Hydrocarbon odor and product present.
17				17.0 -----				
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ENE START WELL LOG B (AVERY) START_AVERY.3.GPJ E&E PORTLAND.GDT 7/31/07



DRILLING LOG OF WELL/BORING NO. EMW 01

Page 1 of 1

DATE DRILLED: 4/16/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: Arbitrary Site Datum
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation 97.81 ft	Heavy Gauged Steel Protective Casing			ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1	2" PVC Cement			Not Sampled				
2	Hydrated Bentonite chips			2.0				
3	20-slot V-wire screen		FILL	WELL GRADED SAND WITH GRAVEL. Moderate brown, dry, medium dense, fine to medium grained, with fractured fine to coarse gravel.		20 48 23 25	1.2	
4	10/20 Filter sand			4.0				
5			FILL	POORLY GRADED SAND WITH GRAVEL AND SILT. Moderate brown with flecks of red, black, and tan, dry, dense, fine grained sand with lesser coarse sand. Fractured fine to coarse gravel with moist silt.		15 10 8 7	1.0	
6				6.0				
7			FILL	POORLY GRADED SAND WITH GRAVEL AND SILT. Moderate brown, dry to moist (at 7.5'), dense, fine to medium grained sand, with fractured fine to medium gravel.		5 6 7 8	0.5	
8				8.0				
9				Not Sampled				
10				10.0				
11				Not Sampled				
12				12.0				
13				12.6				
14								
15								

ENE START WELL LOG B (AVERY) START_AVERY1.GPJ E&E PORTLAND.GDT 7/31/07



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: EMW 01

DRILLING LOG OF WELL/BORING NO. EMW 02

Page 1 of 1

DATE DRILLED: 4/17/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: Arbitrary Site Datum
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation 97.52 ft	Heavy Gauged Steel Protective Casing			ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1	2" PVC Cement			Not Sampled				
2	Hydrated Bentonite Chips							
3								
4								
5	10/20 Filter Sand		FILL	3.0 WELL GRADED SAND WITH GRAVEL. Moderate brown, dry, medium dense, fine to coarse grained with fractured fine to coarse angular gravel and some silt.		15 15 9 12	1.3	
6	20-slot V-wire screen		MLS	5.0 SANDY SILT (MLS) Black, moist, soft, slightly plastic silt with roots and casts.		1 1 4 5	1.5	Moderate hydrocarbon odor.
7								
8			SM	8.0 SILTY SAND (SM) Black, moist to wet, medium dense, fine to coarse grained sand.		3 3 12 17	0.3	Hydrocarbon product. Sample blocked by cobble, low recovery.
9				9.0 Not Sampled. Likely fractured rock.				
10								
11								
12								
13								
14								
15								
16				16.0				
17								

ENE START WELL LOG B (AVERY) START_AVERY 1.GPJ E&E PORTLAND.GDT 7/31/07



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PROJECT NAME: Avery Landing
 WELL NO.: EMW 02

DRILLING LOG OF WELL/BORING NO. EMW 03

Page 1 of 1

DATE DRILLED: 4/17/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: Arbitrary Site Datum
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation 97.9 ft	Heavy Gauged Steel Protective Casing			ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1	2" PVC Cement Hydrated Bentonite Chips			Not Sampled.				
2				3.0				
3				Not Sampled. Slough.		5 3 3 2	0.3	
4				5.0				
5				Not Sampled. Woody Debris				
6								
7	10/20 Filter Sand							
8	20-slot V-wire screen			9.0				
9				Not Sampled.				
10				11.0				
11			MLS	SANDY SILT WITH CLAY (MLS) Dark Brown, moist to wet, medium stiff, slight plasticity, with fine sand and clay.		3 5 6 8	2.0	
12			GWS	SANDY GRAVEL WITH SILT (GWS) Dark gray, wet, medium dense, fine to coarse, rounded gravel with coarse sand and some silt packed tightly in pore spaces.		8 10 13 13	1.2	
13				15.0				
14				Not Sampled.				
15								
16								
17								
18								
19				19.0				Refusal
20								



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PROJECT NAME: Avery Landing
 WELL NO.: EMW 03

DRILLING LOG OF WELL/BORING NO. EMW 04

Page 1 of 1

DATE DRILLED: 4/17/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: Arbitrary Site Datum
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation 98.14 ft	Heavy Gauged Steel Protective Casing			ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1	2" PVC Cement			Not Sampled.				
2	Hydrated Bentonite Chips							
3				3.0				
4				SANDY GRAVEL (GPS) Coarse, fractured gravel with sand.		4 4 4 2	IR <.3	Difficult drilling. Lithology based on drill cuttings. Insufficient recovery.
5	10/20 Filter Sand					4 5 8 12	IR <.3	Insufficient recovery.
6						15 14 14 15	IR <.3	Insufficient recovery.
7	20-slot V-wire screen					9 7 6 6	IR <.3	Insufficient recovery.
8						8 9 12 14	IR <.3	Sampler saturated: Hydrocarbon sheen on groundwater. Insufficient recovery.
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								



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PROJECT NAME: Avery Landing
 WELL NO.: EMW 04

DRILLING LOG OF WELL/BORING NO. EMW 05

Page 1 of 1

DATE DRILLED: 4/18/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: Arbitrary Site Datum
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation 100.02 ft	Heavy Gauged Steel Protective Casing			ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1	Cement 2" PVC Hydrated Bentonite Chips			Not Sampled.				
2				3.0				
3								
4								
5								
6								
7	10/20 Filter Sand		SWG	WELL GRADED SAND WITH GRAVEL (SWG) Moderate brown, dry, medium dense to dense, medium to very coarse sand with some silt and fractured gravel. Increasing silt and moisture with depth.		4 6 14 16	0.7	
8						6 4 4 5	0.8	
9	20-Slot V-wire screen					5 6 5 6	0.4	
10				9.5				
11			MLS	SANDY SILT (MLS) Black, moist, moderate plasticity, fine grained sand with silt and roots. Increasing rounded gravel with depth.		2 3 6 7	1.5	Strong hydrocarbon odor
12						4 6 6 8	1.5	Strong hydrocarbon odor
13				12.5				
14			SWG	WELL GRADED SAND WITH GRAVEL (SWG) Dark gray, wet, very dense, very fine to coarse grained sand with rounded fine to coarse gravel and some silt.		17 22 30 38	1.2	Strong hydrocarbon odor and rainbow sheen with drops of black product
15				15.0				
16				Not Sampled. Gravel in drill cuttings.				Difficult drilling
17								
18								
19								
20				19.5				Refusal



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PROJECT NAME: Avery Landing
 WELL NO.: EMW 05

DRILLING LOG OF WELL/BORING NO. EMW 06

Page 1 of 2

DATE DRILLED: 4/18/2007
 LOGGED BY: Jeff Fowlow
 CHECKED BY: S. Hall
 DRILLING CONTRACTOR: Environmental West Exploration, Inc.
 DRILLED BY: Randy Wilder
 DRILLING METHOD: Hollow Stem Auger
 VERTICAL DATUM: Arbitrary Site Datum
 LOCATION: Avery, ID

PROJECT NAME: Avery Landing
 PROJECT LOCATION: Avery, Idaho
 SSID #: 10ZZ
 EPA TASK MANAGER: Earl Liverman
 TDD #: 07-03-0004
 START PROJECT #: 002233.0193.01SF
 START PROJ MGR: Steve Hall

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
Ground Surface Elevation 99.15 ft	Heavy Gauged Steel Protective Casing			ground surface (gs)				This log is part of the report prepared for the named project and should be read together with that report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.
1	Cement 2" PVC			Not Sampled. Black glassy sand/gravel/cinder				
2	Hydrated Bentonite Chips							
3				3.0				
4			SWG	WELL GRADED SAND WITH GRAVEL (SWG) Moderate brown, dry, dense, medium to very coarse grained sand with fractured gravel and some silt.		8 6 8 9	1.0	
5			SWG			10 8 6 9	0.5	
6				7.5				
7	10/20 Filter Sand		MLS	SANDY SILT (MLS) Black, moist, soft, slight plasticity silt with fine sand and roots.		3 1 1 1	1.2	Hydrocarbon odor and sheen.
8				9.5				
9	20-slot V-wire screen		SWG	WELL GRADED SAND WITH GRAVEL (SWG) Black, moist to wet, medium dense, fine to very coarse grained sand with decreasing silt and increasing gravel content with depth.		3 3 8 15	1.3	Hydrocarbon odor and oily liquid present.
10				11.0				
11			GWS	WELL GRADED GRAVEL WITH SAND (GWS) Gray, wet, dense, fine to coarse grained gravel with medium to coarse sand and some silt present.		13 15 28 36	IR	Sample stained black with oily liquid. Insufficient recovery.
12			GWS					
13				13.0				
14								



ecology and environment, inc.

PROJECT NAME: Avery Landing
 WELL NO.: EMW 06

ELEVATION DEPTH (feet)	WELL COMPLETION DIAGRAM	GRAPHIC LOG	USCS	SOIL/ROCK DESCRIPTION	SAMPLE INTERVAL	BLOW COUNTS	RECOVERY (FT)	COMMENTS
85			GWS	WELL GRADED GRAVEL WITH SAND (GWS) Gray, wet, dense fine to coarse grained gravel with medium to coarse sand and some silt and cobbles present. <i>(continued)</i>			IR	Insufficient recovery.
15			GWS	WELL GRADED GRAVEL WITH SAND (GWS) Gray, wet, dense, fine to coarse grained gravel with medium to coarse sand and some silt.			IR	Cuttings show oily liquid. Easier drilling. Insufficient recovery.
16			GWS	WELL GRADED GRAVEL WITH SAND (GWS) Gray, wet, dense, fine to coarse grained gravel with medium to coarse sand and some silt.			IR	Difficult drilling. Insufficient recovery.
17			GWS	Increased sand/fine gravel content from last sample.				
18			GWS	WELL GRADED GRAVEL WITH SAND (GWS) Gray, wet, dense, fine to coarse grained gravel with medium to coarse sand. Increased coarse gravel from last sample.				
18.5								
80								
19								
20								
21								
22								
23								
24								
75								
25								
26								
27								
28								
70								
29								
30								
31								
32								
33								

ENE START WELL LOG B (AVERY) START_AVERY 1.GPJ E&E PORTLAND.GDT 7/31/07






Borehole Logs
2009 Potlatch Field Investigation

RECORD OF BOREHOLE BH-01

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-28-09
LOCATION: T45N, R5E Section 15 DRILL RIG: HSA

DATUM: NAVD 88 STATION: N/A
ELEVATION: 2483.27 INCLINATION: -90
COORDINATES: N: 2,035,323.08 E: 2,607,330.39

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■					NOTES WATER LEVELS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)					
					DEPTH (ft)						W _p ----- W _L					
												10	20	30		40
0	HSA	0.0 - 7.0 Very dense, light brown, angular coarse GRAVEL, some sand, dry. (GP) (FILL)	GP			1	SPT	2.4	N	1.5						
5																
7.0		7.0 - 15.0 Very dense, light brown, fine sandy SILT, some gravel, moist. (ML)	ML		2476.3 7.0	2	SPT	2.0	Y	1.5						
10																
15		15.0 - 20.0 Very dense, grey, fine SAND, trace fine gravel, wet. (SP) * LNAPL observed in soil at 13 ft bgs. * Small pockets of LNAPL in sample (2cm). * Petroleum-like sheen on water surface.	SP		2468.3 15.0	3	SPT	-	Y	1.5						
20																
20		Boring completed at 20.0 ft.			2463.3 20.0											
25																
30																
35																
40																

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
DRILLING CONTRACTOR: Northwest
DRILLER: B. Johnson

LOGGED: A. Cote
CHECKED: D. Morell
DATE:








RECORD OF BOREHOLE BH-02

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
 PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-28-09
 LOCATION: T45N, R5E Section 15 DRILL RIG: HSA

DATUM: NAVD 88 ELEVATION: 2483.3
 STATION: N/A INCLINATION: -90
 COORDINATES: N: 2,035,331.93 E: 2,607,381.18

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■					NOTES WATER LEVELS		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)						
					DEPTH (ft)						W _p 20 40 60 80 W _i						
0	HSA	0.0 - 6.5 Very dense, light brown, angular coarse GRAVEL, some sand, dry. (GP) (FILL)	GP			1	SPT	-	N	1.5							
5						2	SPT	-	-	1.5							
		6.5 - 7.5 Black, fine SAND, fine some fine gravel.	SP		2476.8 6.5												
		7.5 - 10.2 Very dense, brown to black streaked, fine GRAVEL, some sand, trace silt, damp. (GP)	GP		2475.8 7.5	3	SPT	2.8	-	1.5							
10			10.2 - 15.0 Very dense, brown silty fine GRAVEL, some sand, damp. (GM)	GM		2473.1 10.2	4	SPT	1.9	Y	1.5						
15			15.0 - 20.0 Very dense, grey, SAND, some fine silt, trace fine gravel, wet. (SM) * Petroleum-like product oozing from sand.	SM		2468.3 15.0	5	SPT	21.9	Y	1.5						
20		Boring completed at 20.0 ft.			2463.3 20.0												
25																	
30																	
35																	
40																	

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
 DRILLING CONTRACTOR: Northwest
 DRILLER: B. Johnson

LOGGED: A. Cote
 CHECKED: D. Morell
 DATE:




RECORD OF BOREHOLE BH-03

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-27-09
LOCATION: T45N, R5E Section 15 DRILL RIG: HSA

DATUM: NAVD 88 STATION: N/A
ELEVATION: 2483.53 INCLINATION: -90
COORDINATES: N: 2,035,344.56 E: 2,607,447.83

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
					DEPTH (ft)						W_p ——— W ——— W_L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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0	HSA	0.0 - 7.5 Very dense, light brown, angular, coarse GRAVEL, some sand and wood debris, dry. (GP) (FILL) * Dark, fine grained material at 6-7 ft bgs.	GP			1	SPT	-	N	1.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											</

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
DRILLING CONTRACTOR: Northwest
DRILLER: B. Johnson

LOGGED: A. Cote
CHECKED: D. Morell
DATE:



RECORD OF BOREHOLE BH-04

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-27-09
LOCATION: T45N, R5E Section 15 DRILL RIG: HSA

DATUM: NAVD 88 STATION: N/A
ELEVATION: 2481.90 INCLINATION: -90
COORDINATES: N: 2,035,368.59 E: 2,607,393.18

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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0	HSA	0.0 - 7.5 Very dense, light brown, angular coarse GRAVEL, some sand, dry. (GP) (FILL)	GP			1	SPT	-	N	1.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
DRILLING CONTRACTOR: Northwest
DRILLER: B. Johnson

LOGGED: A. Cote
CHECKED: D. Morell
DATE:






RECORD OF BOREHOLE BH-05

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-27-09
LOCATION: T45N, R5E Section 15 DRILL RIG: HSA

DATUM: NAVD 88 STATION: N/A
ELEVATION: 2482.62 INCLINATION: -90
COORDINATES: N: 2,035,382.28 E: 2,607,478.09

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)						
					DEPTH (ft)						10	20	30	40			
0	HSA	0.0 - 5.0 Very dense, light brown, angular coarse GRAVEL, some sand, dry. (GP) (FILL)	GP			1	SPT	-	N	1.5							
5		5.0 - 7.5 Very dense, brown to black, SILT, some gravel, moist. (ML) * Petroleum-like odor and sheen present.	ML		2477.6 5.0	2	SPT	300	Y	1.5							
		7.5 - 10.0 Very dense, greyish brown, coarse GRAVEL (<2"), some sand, damp. (GP) * Petroleum-like odor present.	GP		2475.1 7.5												
10		10.0 - 15.0 Very dense, grey, sandy SILT, some fine gravel, moist. (ML) *Petroleum-like odor and sheen present.	ML		2472.6 10.0												
15	15.0 - 17.0 Very dense, grey, fine GRAVEL, some sand, wet. (GP) * LNAPL observed on some gravel. * Sheen on water surface. Boring completed at 17.0 ft.	GP		2467.6 15.0	3	SS	75	Y	1.5								
					2465.6 17.0												
20																	
25																	
30																	
35																	
40																	

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
DRILLING CONTRACTOR: Northwest
DRILLER: B. Johnson

LOGGED: A. Cote
CHECKED: D. Morell
DATE:






RECORD OF BOREHOLE GA-01

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
 PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-26-09
 LOCATION: T45N, R5E Section 16 DRILL RIG: HSA

DATUM: NAVD 88 STATION: N/A
 ELEVATION: 2478.19 INCLINATION: -90
 COORDINATES: N: 2,035,039.29 E: 2,606,817.87

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC			
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)						
					DEPTH (ft)						W _p	W	W _i				
0	HSA	0.0 - 7.5 Very dense, dark brown SAND, some angular coarse gravel, dry. (SP) (FILL)	GP			1	SPT	-	-	1.5						Concrete seal: 0-1ft. bgs.	
																Bentonite: 1-4ft. bgs.	
5																	
			7.5 - 15.0 Very dense, brown, silty SAND, trace gravel, moist. (SM)	SM		2470.7 7.5	3	SPT	.3	-	1.5						
10																	
		15.0 - 21.0 Very dense, brown, silty medium SAND, moist. (SM) * LNAPL and sheen present.	SC		2463.2 15.0	4	SPT	30.3	Y	1.5						10/20 Carmeuse Industrial Sand	
15																	Well screen: 6-21ft. bgs.
20		Boring completed at 21.0 ft.			2457.2 21.0												
25																	
30																	
35																	
40																	

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
 DRILLING CONTRACTOR: Northwest
 DRILLER: B. Johnson

LOGGED: A. Cote
 CHECKED: D. Morell
 DATE:



RECORD OF BOREHOLE GA-02

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
 PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-26-09
 LOCATION: T45N, R5E Section 16 DRILL RIG: HSA

DATUM: NAVD 88 ELEVATION: 2472.74
 STATION: N/A INCLINATION: -90
 COORDINATES: N: 2,035,167.80 E: 2,606,235.34

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)					
					DEPTH (ft)						W _p ——— W _l					
												10	20	30	40	
0	HSA	0.0 - 1.5 Loose, light brown SILT, little organics (roots), dry (ML) (TOPSOIL)	ML		2471.2	1	SPT		-	1.5						Concrete seal: 0-1.1ft. bgs.
		1.5 - 10.0 Very dense, dark brown, silty medium SAND, organics (roots), little angular coarse GRAVEL, some sand, moist. (SM)	SM		1.5											Bentonite: 1-4.1ft. bgs.
5						2	SPT		10.1	1.5						
10		10.0 - 15.0 Very dense, brown SAND, little gravel, trace silt, moist. (SP)	SP		2462.7	3	SPT		-	1.5						10/20 Carmeuse Industrial Sand
15		15.0 - 20.0 Very dense, grey, silty medium SAND, little gravel, wet. (GP)	SM		2457.7	4	SPT		21.9	1.5						Well screen: 6-21ft. bgs.
20		Boring completed at 20.0 ft.			2452.7											
					20.0											
25																
30																
35																
40																

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
 DRILLING CONTRACTOR: Northwest
 DRILLER: B. Johnson

LOGGED: A. Cote
 CHECKED: D. Morell
 DATE:








RECORD OF BOREHOLE GA-03

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
 PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-26-09
 LOCATION: T45N, R5E Section 16 DRILL RIG: HSA

DATUM: NAVD 88 STATION: N/A
 COORDINATES: N: 2,035,231.33 E: 2,605,955.05
 ELEVATION: 2479.23 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)				GRAPHIC	
					DEPTH (ft)						W _p	I	W _L			
0	HSA	0.0 - 8.0 Very dense, brown, silty angular GRAVEL, dry. (GM)	GM		2471.2 8.0	1	SPT	-	N	1.5					Concrete seal: 0-1ft. bgs.	
5						2	SPT	-	-	1.5					Bentonite: 1-9.5ft. bgs.	
		8.0 - 13.0 Very dense, dark brown, Organic SILT, some wood debris, sand, and trace gravel, moist. (OL)	OL		2466.2 13.0	3	SPT	15		1.5						
10						4	SPT		N	1.5						
		13.0 - 18.5 Very dense, brown, fine GRAVEL, damp. (GP)	GP		2460.7 18.5	5	SPT	56	Y	1.5						
15																
		18.5 - 25.0 Very dense, grey, fine SAND, trace silt and gravel, damp. (SP) * Sheen present.	SP		2454.2 25.0	6	SS	21	Y	1.5					10/20 Carmeuse Industrial Sand	
20																
25			25.0 - 26.5 Very dense, light brown medium SAND, some fine gravel, wet. (SP) Boring completed at 26.5 ft.	SP		2452.7 26.5	7	SS	51		1.5					
30																
35																
40																

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
 DRILLING CONTRACTOR: Northwest
 DRILLER: B. Johnson

LOGGED: A. Cote
 CHECKED: D. Morell
 DATE:



RECORD OF BOREHOLE GA-04

SHEET 1 of 1

PROJECT: Potlatch/Avery Landing/Idaho DRILLING METHOD: HSA
 PROJECT NUMBER: 073-93312-03 DRILLING DATE: 08-25-09
 LOCATION: T45N, R5E Section 16 DRILL RIG: HSA

DATUM: NAVD 88 ELEVATION: 2472.21
 STATION: N/A INCLINATION: -90
 COORDINATES: N: 2,035,201.52 E: 2,606,541.81

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID Reading PPM	Sheen	REC / ATT	WATER CONTENT (PERCENT)				
					DEPTH (ft)						W _p	W	W _L		
0	HSA	0.0 - 0.5 Loose, brown, silty SAND, some organics, moist. (SM)	SM		2471.7 0.5	1	SS	-	-	1.5					Concrete seal: 0-1ft. bgs.
		0.5 - 7.0 Very dense, brown, sandy GRAVEL, some pieces of concrete, dry. (GM) (FILL)	GM												Bentonite: 1-5ft. bgs.
5						2	SS	-	-	1.5					
		7.0 - 21.0 Very dense, brown, sandy medium GRAVEL, rounded, moist. (GP)	GP		2465.2 7.0										
10						3	SS		N	1.5					10/20 Carmeuse Industrial Sand
15														Well screen: 6-21ft. bgs.	
20															
		Boring completed at 21.0 ft.			2451.2 21.0										
25															
30															
35															
40															

ENVIRONMENTAL BOREHOLE-BB AVERY-POTLACH LOGS.GPJ BRENDAGDT 1/7/10

1 in to 5 ft
 DRILLING CONTRACTOR: Northwest
 DRILLER: B. Johnson

LOGGED: A. Cote
 CHECKED: D. Morell
 DATE:





LOG OF TEST PIT TP-01

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-27-09

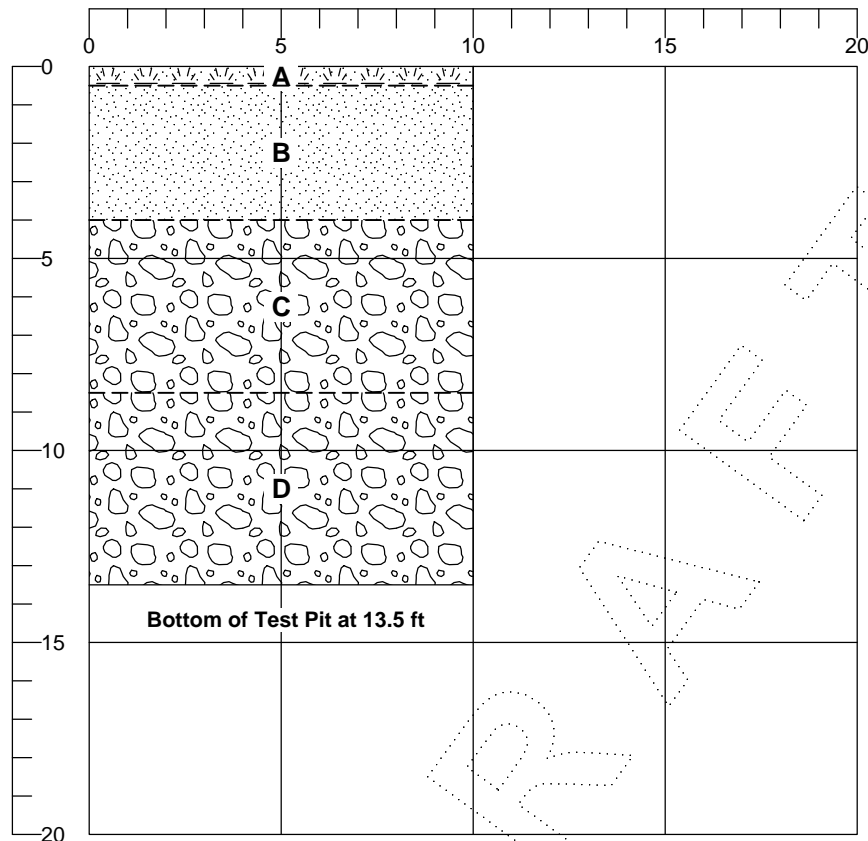
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.0		
5	12.5		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Compact, brown, silty SAND, some organics, dry. (SM) (TOPSOIL)

B 0.5 - 4.0 ft: Compact, dark grey, angular, gravelly SAND, little silt and cobbles, dry. (SP) (FILL)*

*Black stained soil encountered at approximately 2' bgs.

C 4.0 - 8.5 ft: Compact, brown, sandy, angular GRAVEL, little silt and cobbles, damp to moist. (GP) (FILL)

D 8.5 - 13.5 ft: Compact, dark grey to black, rounded GRAVEL and COBBLES, trace silt and sand, damp. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
10:10	13.5	
SPECIAL NOTES:		
Groundwater encountered at approximately 13.5 ft bgs.		
Petroleum-like odor begins at approximately 10' bgs.		
Tree stump at bottom of test pit.		
All excavated soil was placed back in test pit.		



LOG OF TEST PIT TP-02

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-27-09

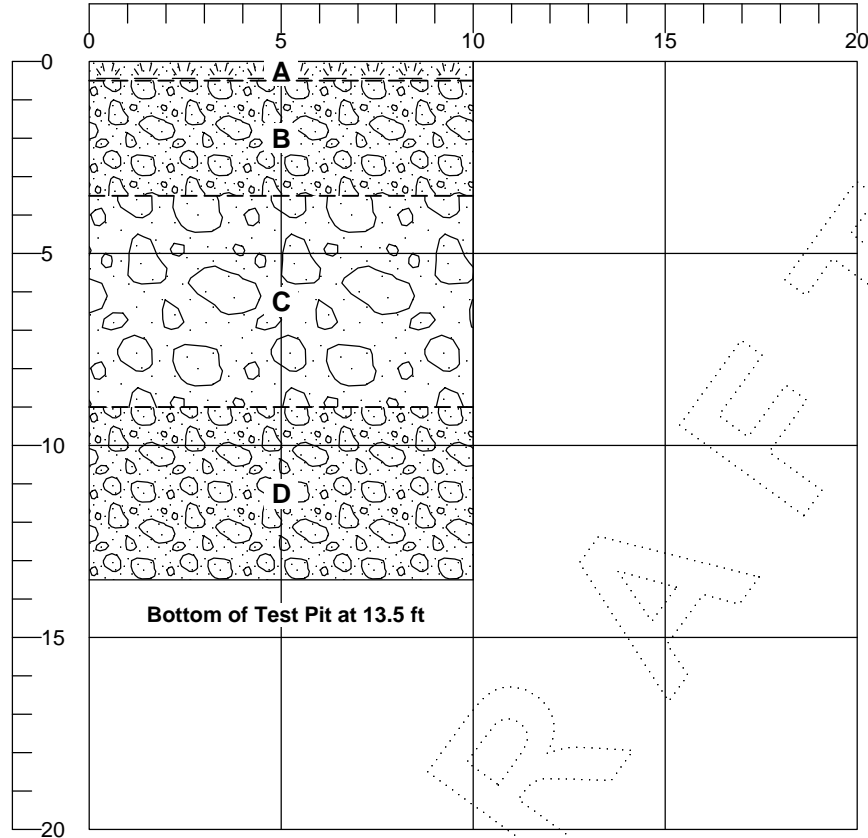
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	8.0		
4	10.0		
5	12.5		
6	13.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 0.5 ft: Compact, brown, silty SAND, some organics, dry. (SM) (TOPSOIL)
- B** 0.5 - 3.5 ft: Compact, dark brown, angular, gravelly SAND, some cobbles, trace silt and debris (including beer cans), dry. (GP) (FILL)
- C** 3.5 - 9.0 ft: Compact, brown, angular GRAVEL, some sand and cobbles, trace silt, moist. (GP) (FILL)
- D** 9.0 - 13.5 ft: Compact, brown, sandy, angular GRAVEL, some angular cobbles, moist. (GP) (FILL)

TIME	DEPTH TO W/L (FT)	NOTES
12:20	13.5	
SPECIAL NOTES:		
Groundwater encountered at approximately 13.5 ft bgs.		
No visibly impacted media.		



LOG OF TEST PIT TP-03

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-27-09

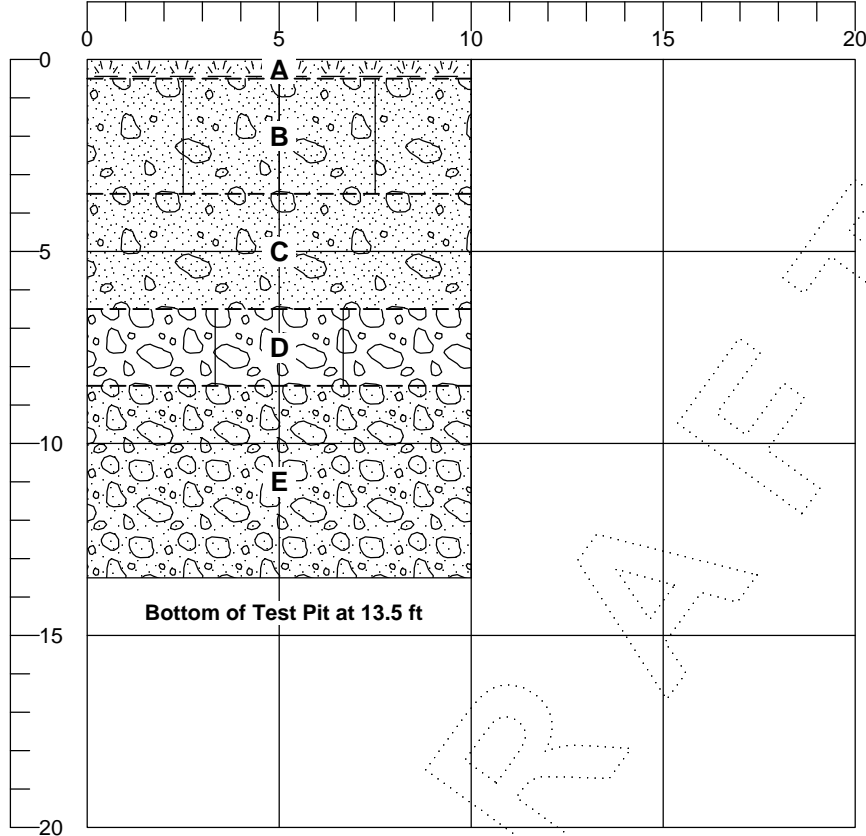
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	11.0		
5	13.5		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 0.5 ft: Compact, brown, silty SAND, some organics, dry. (SM) (TOPSOIL)
- B** 0.5 - 3.5 ft: Compact, dark grey, silty SAND, some angular gravel, cobbles and organic material, damp. (SM) (FILL)
- C** 3.5 - 6.5 ft: Compact, black, silty SAND, some wood chips, trace gravel, moist. (SP) (FILL)
- D** 6.5 - 8.5 ft: Compact, dark brown, sandy, rounded GRAVEL, some silt, moist to wet. (GP-GM) (ALLUVIUM)
- E** 8.5 - 13.5 ft: Compact, brown, sandy, rounded GRAVEL, some silt and cobbles, moist to wet. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
15:07	13.5	
SPECIAL NOTES:		
Groundwater encountered at approximately 13.5 ft bgs.		
Faint oil-like odor at approximately 11' bgs. Oil-like staining at approximately 13' bgs.		
Petroleum-like sheen and droplets of oil-like product observed on water table.		



LOG OF TEST PIT TP-04

Name Potlatch/Avery Landing/Idaho

Job 073-93312-03

Location T45N, R5E Section 16

Elevation _____

Datum NAVD 88

Temp 80 °F Weather Sunny

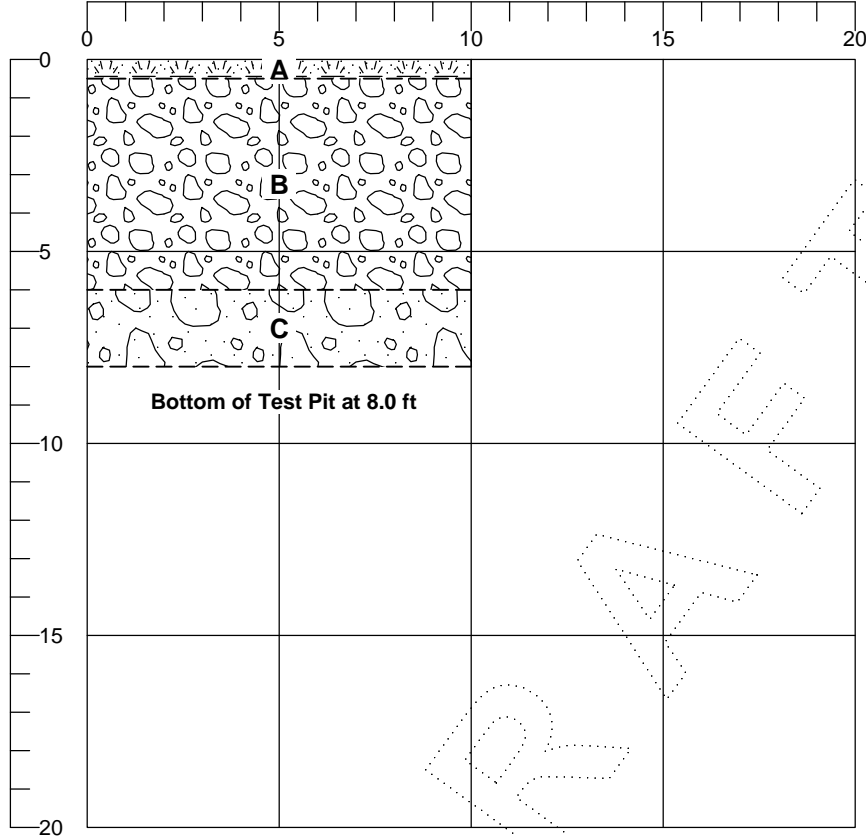
Date 08-27-09

Logged by F. Ishihara

Equipment CAT 315C

Contractor Able Clean-up

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	8.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 0.5 ft: Compact, brown, silty SAND, some gravel and organics, dry. (SM) (FILL)
- B** 0.5 - 6.0 ft: Compact, brown, sandy angular to rounded GRAVEL and COBBLES, trace silt, dry. (GP) (FILL)
- C** 6.0 - 8.0 ft: Compact, grey, sandy GRAVEL and COBBLES, moist to wet. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
16:20	8.0	

SPECIAL NOTES:

Groundwater encountered at approximately 8 ft bgs.

No impacted media observed.



LOG OF TEST PIT TP-05

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-27-09

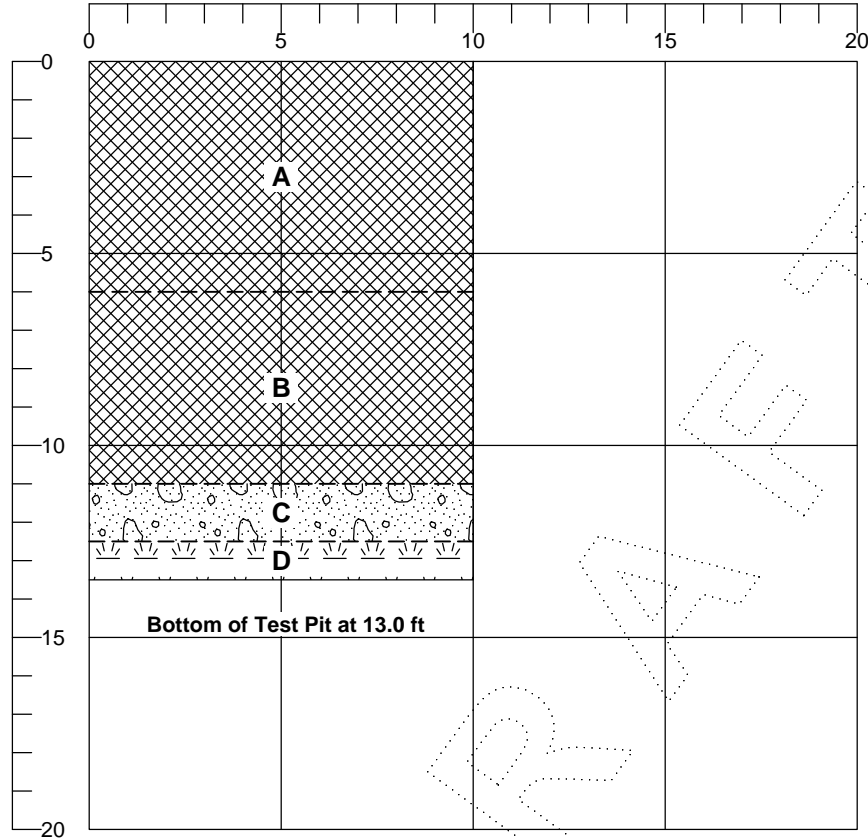
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.5		
5	11.0		
6	13.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 6.0 ft: Compact, brown, angular GRAVEL and COBBLES, little sand and debris (chunks of concrete), trace silt, damp. (GP) (FILL)
- B** 6.0 - 11.0 ft: Loose, black WOOD CHIPS, some gravel and cobbles, damp. (WOOD DEBRIS)
- C** 11.0 - 12.5 ft: Loose, grey SAND and rounded GRAVEL, trace silt, moist. (SP)
- D** 12.5 - 13.5 ft: Loose, black WOOD CHIPS, damp. (WOOD DEBRIS)

Test pit re-excavated approximately 40' east. Logs were encountered again at the new location.

TIME	DEPTH TO W/L (FT)	NOTES
09:30	11.0	
SPECIAL NOTES:		
Groundwater encountered at approximately 11 ft bgs.		
No impacted media encountered.		
Bucket refusal at approximately 13 ft bgs on large pieces of timber.		



LOG OF TEST PIT TP-05N

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-28-09

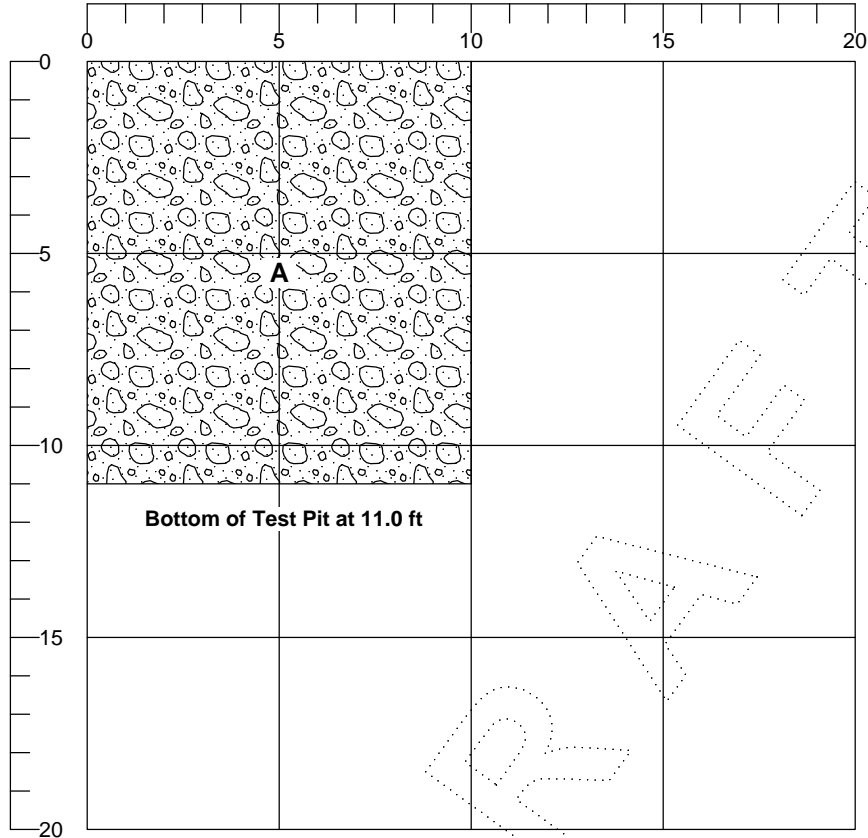
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 11.0 ft: Loose, brown, sandy GRAVEL, little cobbles and organics (including wood chips and 30" diameter logs), dry to moist. (GP) (FILL)

TIME	DEPTH TO W/L (FT)	NOTES
SPECIAL NOTES:		
No groundwater encountered.		
Bucket refusal at approximately 11 ft bgs on large pieces of timber.		



LOG OF TEST PIT TP-06

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-28-09

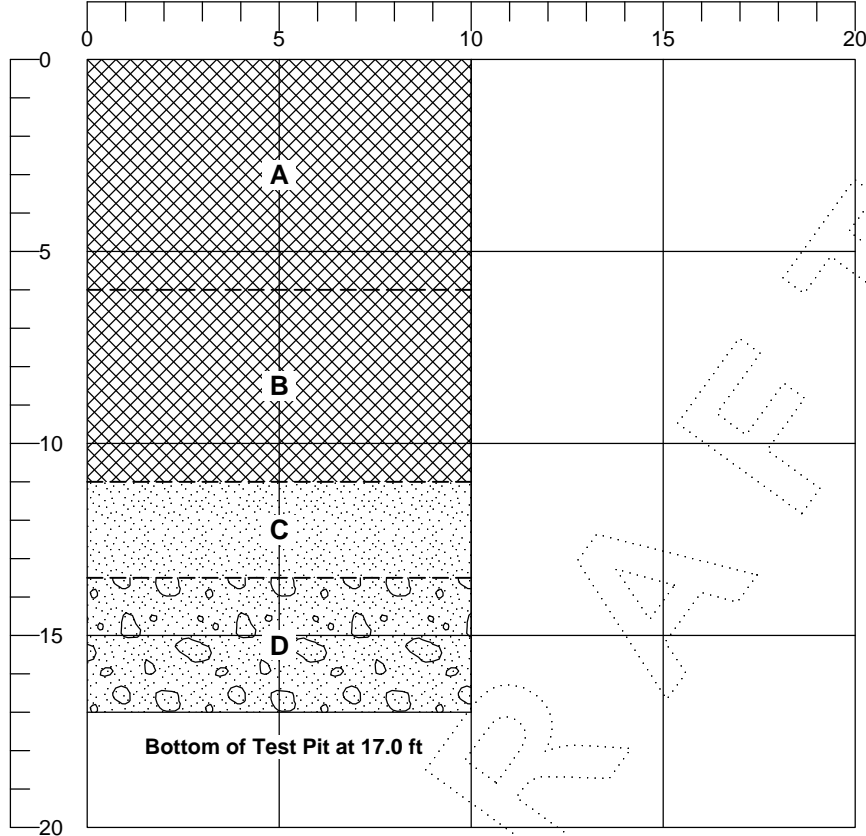
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.0		
5	12.5		
6	15.0		
7	17.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 6.0 ft: Compact, brown, angular GRAVEL, some cobbles, trace sand, dry to damp. (GP) (FILL)
- B** 6.0 - 11.0 ft: Loose, black WOOD CHIPS, little gravel and cobbles, damp. (WOOD DEBRIS)
- C** 11.0 - 13.5 ft: Loose, brown SAND, little organics, moist. (SP)
- D** 13.5 - 17.0 ft: Loose, dark brown SAND, little rounded gravel, moist to wet. (SP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
	17.0	

SPECIAL NOTES:

Groundwater encountered at approximately 17 ft bgs.

Fuel-like odor encountered at approximately 8' bgs, increasing in intensity with depth.

Oily product globules encountered at approximately 17' bgs.



LOG OF TEST PIT TP-07

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-28-09

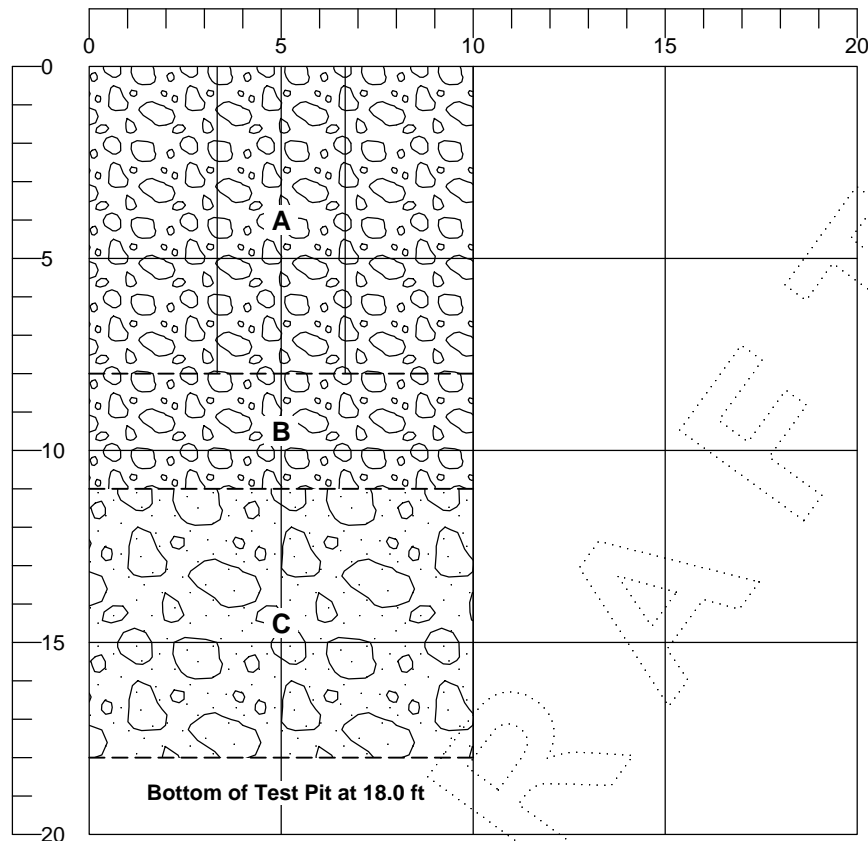
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.0		
5	12.5		
6	18.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 8.0 ft: Compact, brown, angular GRAVEL, some sand, silt, cobbles, and boulders, dry. (GM) (FILL)
- B** 8.0 - 11.0 ft: Compact, brown, angular GRAVEL and COBBLES, little boulders, dry. (GP) (FILL)
- C** 11.0 - 18.0 ft: Compact, grey SAND and rounded GRAVEL, trace silt and cobbles, moist. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
14:00	18.0	
SPECIAL NOTES:		
Groundwater encountered at approximately 18 ft bgs.		
No impacted media observed.		



LOG OF TEST PIT TP-08

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-28-09

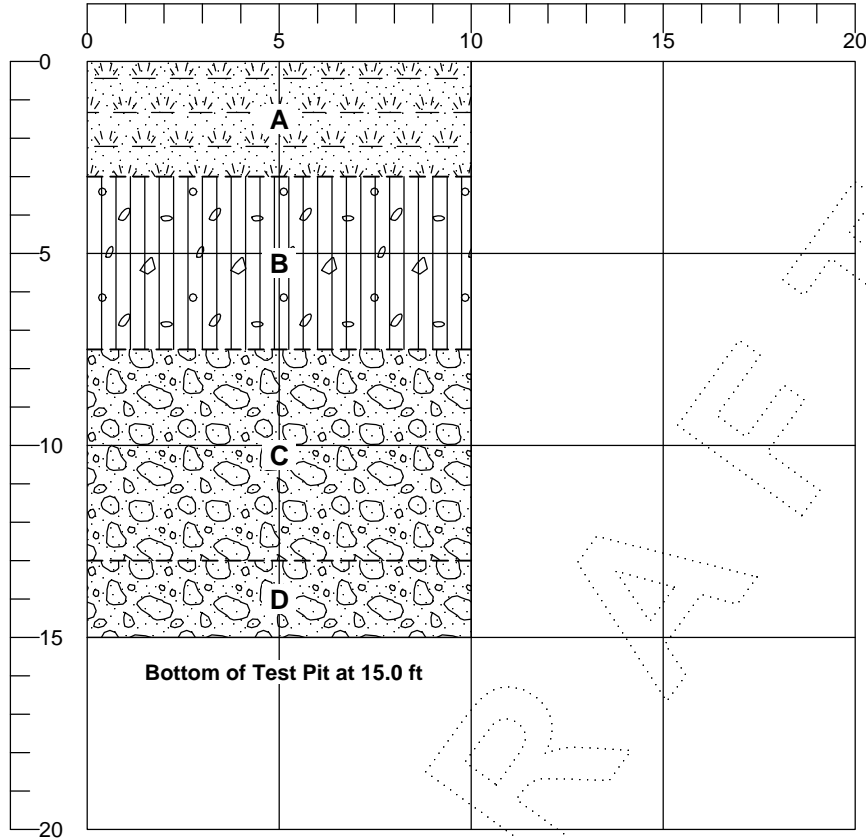
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.0		
5	12.5		
6	14.0		
7	15.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 3.0 ft: Compact, brown, silty SAND, some organics, little angular gravel, dry. (SM) (TOPSOIL)
- B** 3.0 - 7.5 ft: Loose, brown to black ORGANICS and WOOD CHIPS, little angular gravel, damp. (WOOD DEBRIS)
- C** 7.5 - 13.0 ft: Loose, dark brown, sandy, angular to rounded GRAVEL, trace silt and brick fragments, moist. (GP)
- D** 13.0 - 15.0 ft: Loose, grey, sandy, rounded GRAVEL, trace silt, moist to wet. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
15:00	14.0	
SPECIAL NOTES:		
Groundwater encountered at approximately 14 ft bgs.		
Impacted, stained soil observed from approximately 3' bgs to water table.		
Strong petroleum-like odor below 13' bgs.		
Petroleum-like globules of material floating on water table at approximately 14' bgs.		



LOG OF TEST PIT TS-01

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 15

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-25-09

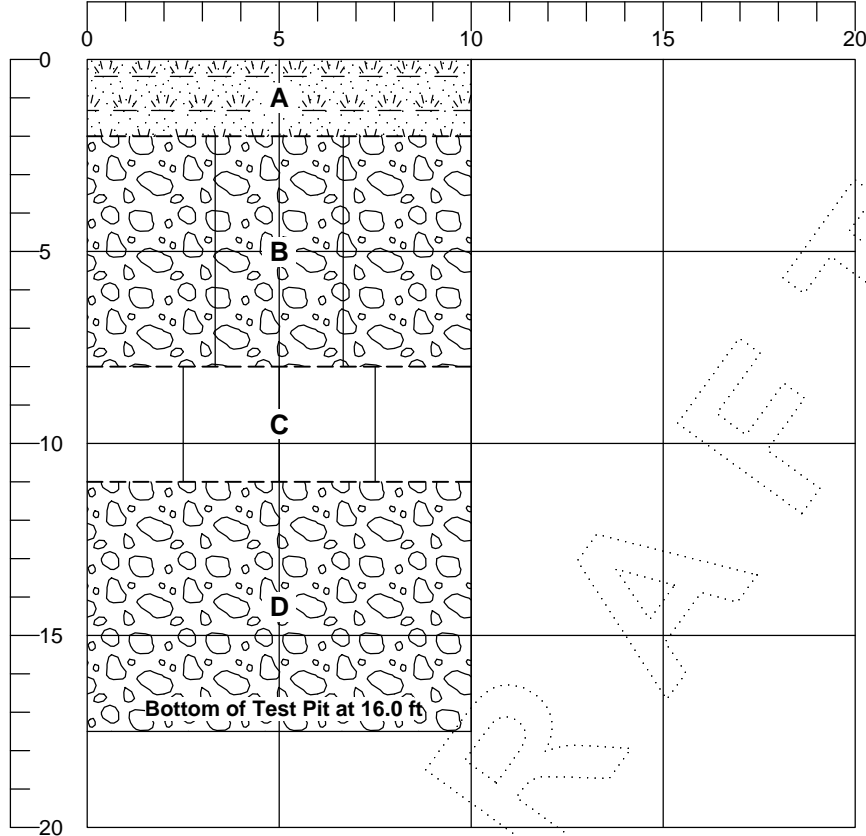
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	1.0		
2	3.5		
3	7.5		
4	10.0		
5	12.5		
6	15.0		
7	17.5		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 2.0 ft: Compact, brown, silty SAND, some organics, trace angular gravel; dry. (SM) (TOPSOIL)

B 2.0 - 8.0 ft: Compact, brown, silty, angular GRAVEL, little sand, damp. (GM) (FILL)*

*Black wedge of contaminated soil at approximately 4 feet.

C 8.0 - 11.0 ft: Loose, brown SILT, some sand, damp. (ML)

D 11.0 - 17.5 ft: Loose, grey, rounded GRAVEL, some sand increasing with depth, damp to wet. (GP) (ALLUVIUM)*

* Soil is oil coated, increasing with depth.

TIME	DEPTH TO W/L (FT)	NOTES
	17.5	

SPECIAL NOTES:

Groundwater encountered at approximately 15 ft bgs.

Strong petroleum-like odor on samples beginning at approximately 10 ft bgs.

Oil coated soil encountered at 14', increasing in amount of oily product with depth.

Approximately 3" diameter metal pipe encountered at approximately 2'.



LOG OF TEST PIT TS-02

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 15

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-25-09

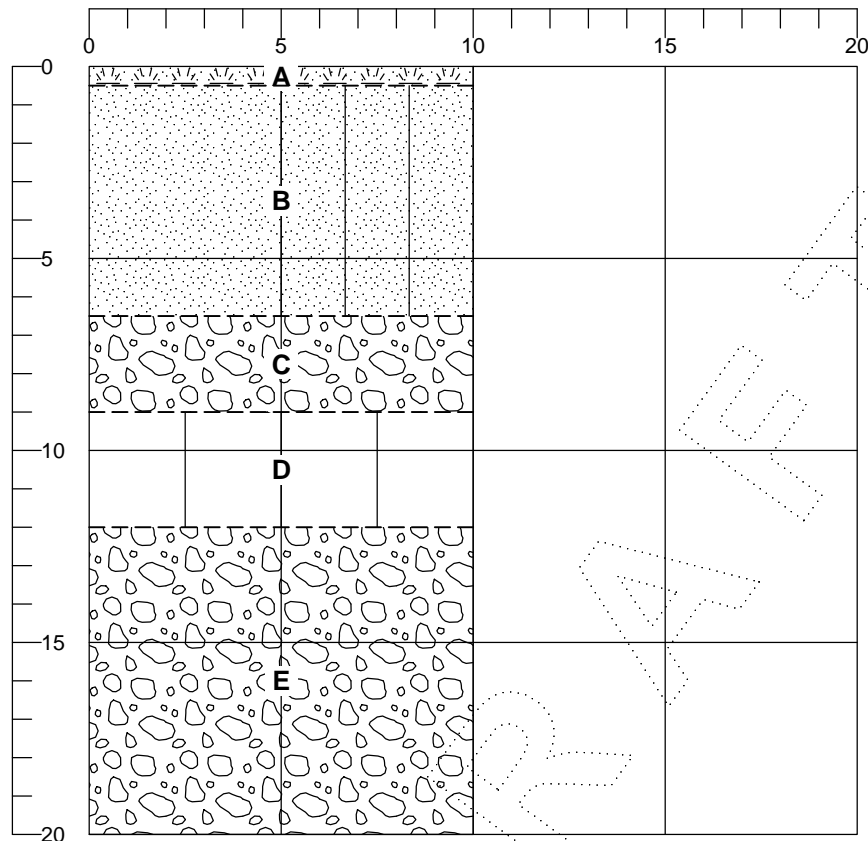
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



Bottom of Test Pit at 20.0 ft

SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	8.5		
4	10.0		
5	12.5		
6	15.0		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 0.5 ft: Compact, brown, silty SAND, some angular gravel and organics, dry. (SM) (FILL)
- B** 0.5 - 6.5 ft: Compact, grey, SAND, some angular gravel and silt, dry. (SP-SM) (FILL)
- C** 6.5 - 9.0 ft: Compact, brown, angular GRAVEL, some sand, little silt, moist. (GP) (FILL)
- D** 9.0 - 12.0 ft: Loose, brown SILT, moist. (ML)
- E** 12.0 - 20.0 ft: Loose, grey, rounded GRAVEL, some sand, wet. (GP) (ALLUVIUM)*

*Soil coloring appeared to indicate petroleum staining.

TIME	DEPTH TO W/L (FT)	NOTES
	19.0	
SPECIAL NOTES:		
Groundwater encountered at approximately 19 ft bgs.		
Wedge of black stained soil at 1.5-2' bgs.		
Strong petroleum-like odor on samples below 8.5 ft bgs.		
Approximately 12" diameter pipe encountered at approximately 6.5'.		



LOG OF TEST PIT TS-03

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 15

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-25-09

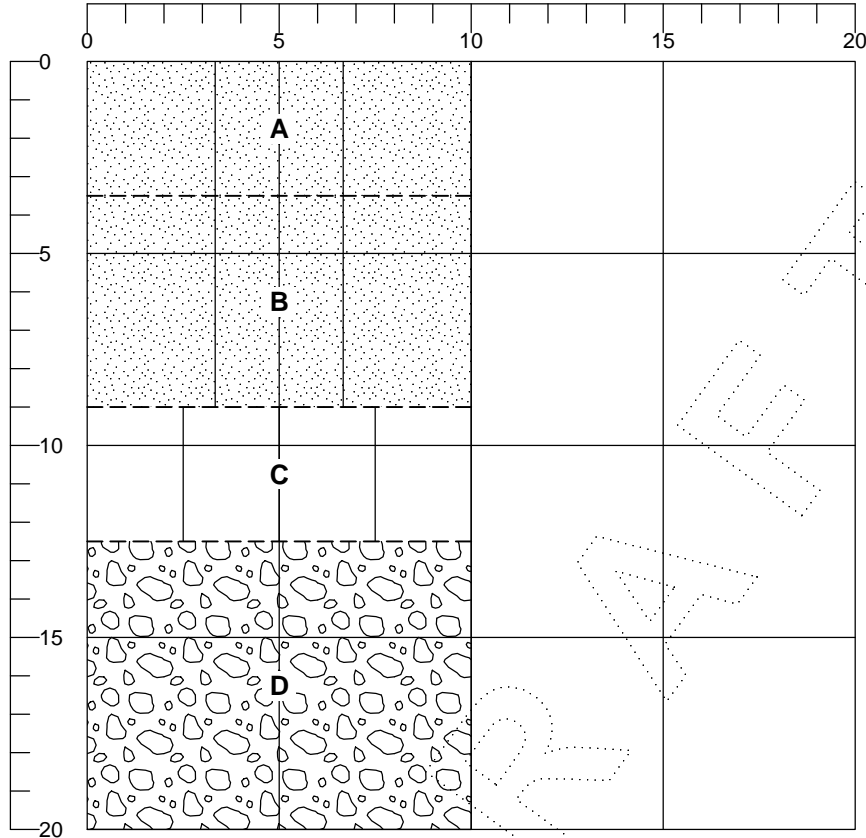
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



Bottom of Test Pit at 20.0 ft

SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.5		
5	13.0		
6	14.5		
7	17.5		
TEST RESULTS			
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 3.5 ft: Compact, grey, silty SAND, some angular gravel, dry. (SM) (FILL)

B 3.5 - 9.0 ft: Compact, dark brown to black, silty SAND, some angular gravel, dry. (SM) (FILL)*

*Soil appeared stained.

C 9.0 - 12.5 ft: Loose, brown to black SILT, moist. (ML)

D 12.5 - 20.0 ft: Loose, grey, rounded GRAVEL, some sand, wet. (GP) (ALLUVIUM)*

*Soil color appeared stained.

TIME	DEPTH TO W/L (FT)	NOTES
	18.0	

SPECIAL NOTES:

Groundwater encountered at approximately 18 ft bgs.

Soil appeared impacted from 3' bgs to bottom of test pit.

Strong petroleum-like odor on samples below 10.5 ft bgs.

Gravel appeared saturated with an oily product.



LOG OF TEST PIT TS-04

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-26-09

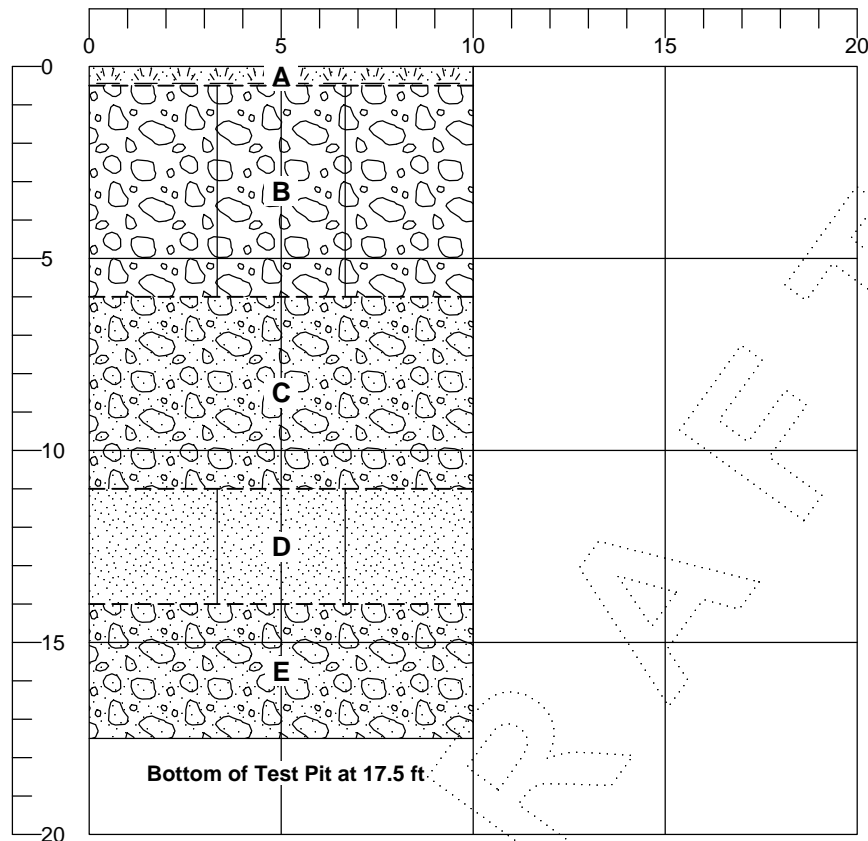
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.5	
2	5.0	
3	7.5	
4	10.0	
5	12.5	
6	13.0	
7	15.0	
8	TEST RESULTS	
DEPTH	WD	DD
% PASSING #200		

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 0.5 ft: Compact, brown, silty SAND, some angular gravel and organics; dry. (SM) (TOPSOIL)
- B** 0.5 - 6.0 ft: Compact, grey, angular GRAVEL, some sand and silt, dry. (GP-GM) (FILL)
- C** 6.0 - 11.0 ft: Compact, brown, angular to rounded GRAVEL, some sand, trace silt, moist. (GP)
- D** 11.0 - 14.0 ft: Loose, brown to grey, silty SAND, little rounded gravel, moist. (SM)
- E** 14.0 - 17.5 ft: Loose, grey to black, sandy, rounded GRAVEL, wet. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
	16.0	
SPECIAL NOTES:		
Groundwater encountered at approximately 16 ft bgs.		
Oil-like odor beginning at approximately 7.5' bgs.		
Clay pipe encountered at approximately 8 ft bgs.		
Soil appeared impacted below 12' bgs.		



LOG OF TEST PIT TS-05

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-26-09

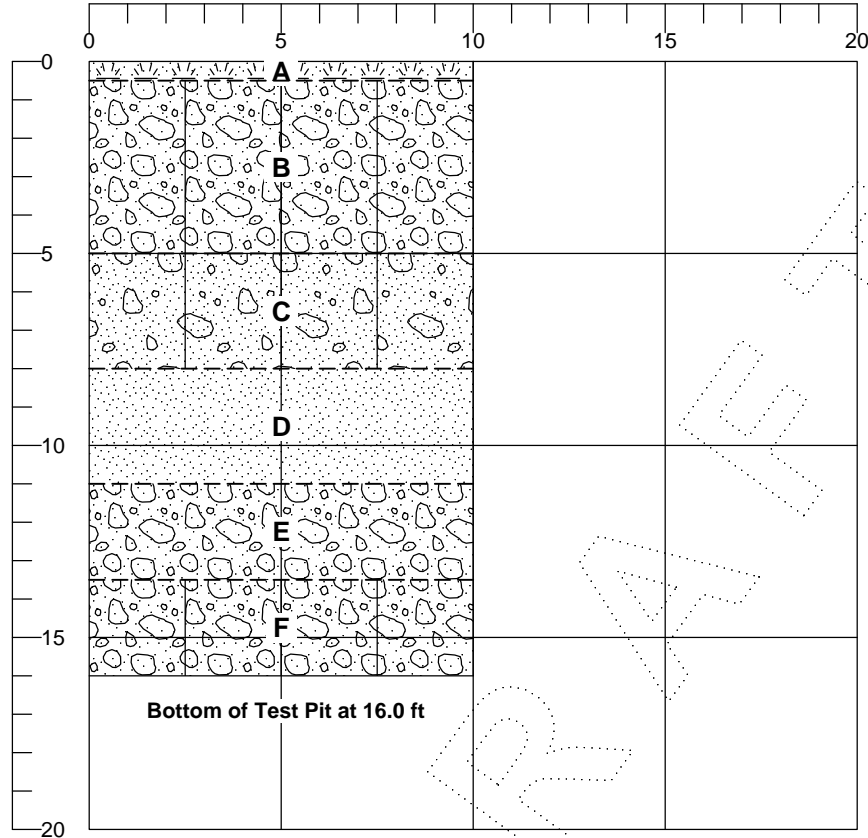
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



SAMPLES			
NO.	DEPTH (ft)	MOISTURE (%)	
1	2.5		
2	5.0		
3	7.5		
4	10.0		
5	12.5		
6	15.0		
7	17.5		
8	TEST RESULTS		
DEPTH	WD	DD	% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 0.5 ft: Compact, brown, silty SAND, some gravel and organics, dry. (SM) (FILL)
- B** 0.5 - 5.0 ft: Compact, grey, silty, angular to rounded GRAVEL, some sand, dry to damp. (GM) (FILL)
- C** 5.0 - 8.0 ft: Compact, black, silty SAND, little angular gravel and wood debris, damp. (SM) (FILL)
- D** 8.0 - 11.0 ft: Compact, brown SAND, trace silt, damp. (SP)
- E** 11.0 - 13.5 ft: Loose, brown, angular GRAVEL, some sand, moist. (GP) (FILL)
- F** 13.5 - 16.0 ft: Compact, black and brown, silty, rounded GRAVEL, some sand, wet. (GM) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
SPECIAL NOTES:		
No groundwater encountered.		
Approximately 3" diameter PVC pipe encountered at approximately 7'.		
Tree trunks, railroad ties, and wood beams encountered at approximately 10 ft bgs.		



LOG OF TEST PIT TS-06

Name Potlatch/Avery Landing/Idaho

Location T45N, R5E Section 16

Temp 80 °F Weather Sunny

Equipment CAT 315C

Elevation _____

Date 08-26-09

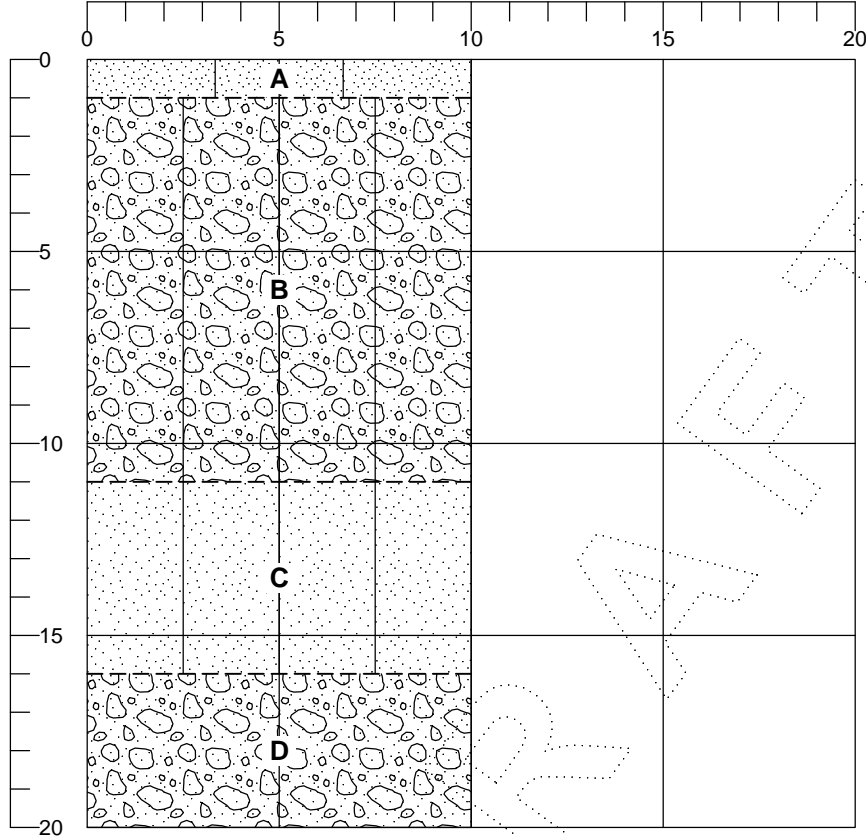
Contractor Able Clean-up

Job 073-93312-03

Datum NAVD 88

Logged by F. Ishihara

Operator C. Smith



Bottom of Test Pit at 20.0 ft

SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.5	
2	5.0	
3	7.5	
4	10.0	
5	12.5	
6	15.0	
7	17.5	
8	TEST RESULTS	
DEPTH	WD	DD
		% PASSING #200

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

- A** 0.0 - 1.0 ft: Compact, grey, silty SAND, some gravel, dry. (SM) (TOPSOIL)
- B** 1.0 - 11.0 ft: Compact, brown, silty, angular GRAVEL, some sand and trace cobbles, dry. (GM) (FILL)
- C** 11.0 - 16.0 ft: Loose, brown to black, sandy SILT, trace rounded gravel and cobbles, moist. (ML)
- D** 16.0 - 20.0 ft: Loose, blue/black, sandy, rounded GRAVEL, trace silt and cobbles, moist. (GP) (ALLUVIUM)

TIME	DEPTH TO W/L (FT)	NOTES
	20.0	

SPECIAL NOTES:

Groundwater encountered at approximately 20 ft bgs.

Impacted material and stained soil beginning at 12' bgs.

Heavy oil staining at approximately 14' bgs.

Oily product appeared very viscous. Some free product visible on cobbles and boulders.

C

Analytical Data Summary Tables, 2007 EPA Removal Assessment

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Table 4-1

**Summary of START-3 Samples
Avery Landing Site
Avery, Idaho**

EPA Sample ID	Location ID	Sample Date	Sample Time	Matrix	Analyses
07040101	EMW-01 SB 06	4/16/2007	15:00	Soil	VOCs
07040102	EMW-01 SB 02	4/16/2007	15:15	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040103	EMW-02 SB 05	4/17/2007	8:15	Soil	VOCs
07040104	EMW-02 SB 07	4/17/2007	8:25	Soil	SVOCs and PCBs
07040105	EMW-02 SB 05	4/17/2007	8:40	Soil	TAL Metals and NWTPH-Dx
07040106	EMW-03 SB 11	4/17/2007	11:45	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040107	EMW-03 SB 11	4/17/2007	11:45	Soil	VOCs
07040108	EMW-04 SB 03	4/17/2007	14:50	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040109	EMW-05 SB 09	4/18/2007	7:51	Soil	VOCs
07040110	EMW-05 SB 09	4/18/2007	8:00	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040111	RB-01 (Rinse Blank)	4/18/2007	9:00	Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040112	EMW-06 SB 07	4/18/2007	10:40	Soil	VOCs
07040113	EMW-06 SB 07	4/18/2007	10:50	Soil	TAL Metals
07040114	EMW-06 SB 09	4/18/2007	10:50	Soil	SVOCs, PCBs, and NWTPH-Dx
07040115	ESB-01 SB 07	4/18/2007	13:45	Soil	VOCs
07040116	ESB-01 SB 07	4/18/2007	13:45	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040117	ESB-02 SB 03	4/18/2007	14:45	Soil	SVOCs, PCBs, and TAL Metals
07040118	ESB-03 SB 09	4/18/2007	15:45	Soil	VOCs
07040119	ESB-03 SB 11	4/18/2007	15:55	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040120	ESB-04 SB 03	4/18/2007	16:50	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040121	ESB-04 SB 07	4/18/2007	16:50	Soil	VOCs
07040122	ESB-04 SB 07	4/18/2007	16:50	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040123	ESB-05 SB 09	4/19/2007	7:50	Soil	VOCs
07040124	ESB-05 SB 15	4/19/2007	8:08	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040125	ESB-05 SB 23	4/19/2007	9:15	Soil	SVOCs and PCBs
07040126	ESB-06 SB 09	4/19/2007	11:04	Soil	VOCs
07040127	ESB-06 SB 11	4/19/2007	11:11	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040128	ESB-07 SB 07	4/19/2007	12:07	Soil	VOCs
07040129	ESB-07 SB 13	4/19/2007	12:29	Soil	SVOCs, PCBs, TAL Metals, and NWTPH-Dx
07040130	TB-01 (Trip Blank)	4/20/2007	15:00	Water	VOCs
07040131	HC-4	4/20/2007	9:50	Product	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040132	SW-01	4/20/2007	10:45	Surface Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040133	SW-02	4/20/2007	11:20	Surface Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040134	SW-03	4/20/2007	12:00	Surface Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040135	EMW-01	4/21/2007	9:15	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040136	EMW-02	4/21/2007	17:50	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040137	EMW-03	4/21/2007	12:00	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040138	EMW-04	4/21/2007	14:16	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040139	EMW-05	4/21/2007	15:47	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040140	EMW-06	4/21/2007	17:45	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040141	HC-1	4/21/2007	13:10	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040142	MW-5	4/21/2007	10:53	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx
07040143	DW-01	4/21/2007	14:20	Ground Water	SVOCs, VOCs, PCBs, TAL Metals, and NWTPH-Dx

Note: The two digits at the end of the soil sample Location ID indicates the depth, in feet below ground surface, where the sample was collected.

Key:

DW	= domestic well
EMW	= EPA monitoring well
EPA	= U.S. Environmental Protection Agency
ESB	= EPA soil boring
HC	= Hart Crowser
ID	= identification
MW	= monitoring well
NWTPH-Dx	= Northwest Total Petroleum Hydrocarbons, Diesel-Range Extended
PCBs	= polychlorinated biphenyls
RB	= rinse blank
SB	= soil boring
START	= Superfund Technical Assessment and Response Team
SVOCs	= semivolatile organic compounds
SW	= surface water
TAL	= Target Analyte List (Metals)
TB	= trip blank

Table 4-2															
Summary of Volatile Organic Compound Results in Soil Samples															
Avery Landing Site															
Avery, Idaho															
Sample Number:	07040101	07040103	07040107	07040109	07040112	07040115	07040118	07040121	07040123	07040126	07040128	07040111	ARARs		
Sample Location:	EMW-01 SB 06	EMW-02 SB 05	EMW-03 SB 11	EMW-05 SB 09	EMW-06 SB 07	ESB-01 SB 07	ESB-03 SB 09	ESB-04 SB 07	ESB-05 SB 09	ESB-06 SB 09	ESB-07 SB 07	RB-01 (Rinsate Blank)	Idaho REM ⁽¹⁾	EPA Region 6 Residential ⁽²⁾	EPA Region 6 Industrial ⁽²⁾
VOCs (µg/kg)	(µg/L)														
1,1,1-Trichloroethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	2,000	1,385,378	1,385,378
1,1,2,2-Tetrachloroethane	3.3 UJ	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 UJ	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	0.92	384	970
1,1,2-Trichloroethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	14	844	2,078
1,1-Dichloroethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	3,479	845,964	2,332,719
1,1-Dichloroethene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	39	280,000	470,000
1,2-Dichloroethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	7.7	350	840
cis-1,2-Dichloroethene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	193	43,000	160,000
trans-1,2-Dichloroethene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	365	120,000	200,000
1,2-Dichloropropane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	8.9	351	847
cis-1,3-Dichloropropene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	2.4	700	1,700
trans-1,3-Dichloropropene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	2.4	700	1,700
2-Butanone	24 J	21	17	29	39 J	9.6 U	10 U	31 J	26 J	54 J	19 J	5.0 U	11,800	32,000,000	32,000,000
2-Hexanone	6 J	13 U	13 U	8.5 U	12 UJ	9.6 U	10 U	11 UJ	11 U	12 U	9 UJ	5.0 U	n.a.	n.a.	n.a.
4-Methyl-2-pentanone	11 U	13 U	13 U	8.5 U	12 UJ	9.6 U	10 U	11 UJ	11 U	12 U	9 UJ	5.0 U	n.a.	n.a.	n.a.
Acetone	85 J	130	93	160	190 J	16 J	6.1 J	230 J	110 J	150 J	78	2.0 J	17,405	14,150,596	60,479,805
Benzene	5.9 J	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	18	656	1,598
Bromodichloromethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	2.7	1,026	2,559
Bromoform	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	29	62,000	240,000
Bromomethane	3.3 UJ	3.9 UJ	3.9 UJ	2.6 UJ	3.5 UJ	2.9 UJ	3.1 UJ	3.4 UJ	3.4 UJ	3.6 UJ	2.7 UJ	1.0 U	50	3,905	14,561
Carbon disulfide	3.3 U	3.9 U	3.9 U	3.1	2.3 J	2.9 U	3.1 U	2.0 J	2.1 J	3.6 U	2.7 UJ	1.0 U	5,971	721,254	721,254
Carbon tetrachloride	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	11	240	582
Chlorobenzene	3.3 U	3.9 U	3.9 U	2.6 U	13 J	2.9 U	3.1 U	13 J	31 J	3.6 U	2.7 UJ	1.0 U	618	273,175	503,436
Chloroethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	53	n.a.	n.a.
Chloroform	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	5.6	245	580
Chloromethane	3.3 U	3.9 U	3.9 UJ	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	23	1,261	2,982
Dibromochloromethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	n.a.	n.a.	n.a.
Dichlorodifluoromethane	3.3 UJ	3.9 U	3.9 UJ	2.6 UJ	3.5 UJ	2.9 UJ	3.1 UJ	3.4 UJ	3.4 UJ	3.6 UJ	2.7 UJ	1.0 U	2,957	94,077	339,733
Ethylbenzene	2.7 J	3.8 J	3.9 U	56	3.5 UJ	2.9 U	3.1 U	3.4 UJ	540 J	13 J	1.8 J	1.0 U	10,200	233,948	233,948
Methylene chloride	3.3 U	5.1 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	7.9 U	2.7 UJ	3.7	17	8,898	22,254
Styrene	2.8 J	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	1,830	1,733,844	1,733,844
Tetrachloroethene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	24 U	3.6 U	2.7 UJ	1.0 U	29	550	1,700
Toluene	17 J	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	4,885	521,170	521,170
Trichloroethene	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	2.9	43	100
Trichlorofluoromethane	3.3 U	3.9 U	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	10,376	386,624	1,420,861
Vinyl chloride	3.3 U	3.9 U	3.9 UJ	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	3.4 U	3.6 U	2.7 UJ	1.0 U	10	43	863
m,p-Xylene	7.1 J	7.8 U	7.7 U	6.4	7.1 UJ	5.8 U	6.2 U	6.7 UJ	25 J	7.2 U	2 J	2.0 U	1,666 ⁽³⁾	210,000 ⁽³⁾	210,000 ⁽³⁾
o-Xylene	4.0 J	3.5 J	3.9 U	2.6 U	3.5 UJ	2.9 U	3.1 U	3.4 UJ	15 J	7.8 J	4.1 J	1.0 U	1,666 ⁽³⁾	210,000 ⁽³⁾	210,000 ⁽³⁾

Notes:

Italics indicates the compound was not detected.

Bold type indicates the compound exceeded the Idaho REM value.

Underline type indicates the compound exceeded the EPA Region 6 residential guideline.

Highlighted cell indicates the compound exceeded the EPA Region 6 industrial guideline.

(1) Idaho Risk Evaluation Manual (DEQ 2004).

(2) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

(3) Xylene standards are for total xylene.

Key:

ARAR = applicable or relevant and relevant requirement

ID = identification

J = estimated value

µg/kg = micrograms per kilogram

µg/L = micrograms per liter

REM = Risk Evaluation Manual

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

Table 4-3 Summary of Semivolatile Organic Compound Results in Soil Samples Avery Landing Site Avery, Idaho											
Sample ID:	07040102	07040104	07040106	07040108	07040110	07040114	07040116	07040117	ARARs		
Sample Location:	EMW-01 SB 02	EMW-02 SB 07	EMW-03 SB 11	EMW-04 SB 03	EMW-05 SB 09	EMW-06 SB 09	ESB-01 SB 07	ESB-02 SB 03	Idaho REM	EPA Region 6 Residential ⁽¹⁾	EPA Region 6 Industrial ⁽²⁾
SVOCs (µg/kg)											
1,2,4-Trichlorobenzene	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	692	142,520	264,776
1,2-Dichlorobenzene	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	5,253	278,923	372,612
1,3-Dichlorobenzene	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	229	68,534	144,219
1,4-Dichlorobenzene	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	76	3,197	8,067
1-Methylnaphthalene	33 U	400	4.1 U	33 U	16,000	30,000	33 U	130	n.a.	n.a.	n.a.
2,4,5-Trichlorophenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
2,4,6-Trichlorophenol	160 U	180 U	21 U	160 U	190 U	200 U	170 U	170 U	n.a.	n.a.	n.a.
2,4-Dichlorophenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	98	183,309	2,052,021
2,4-Dimethylphenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
2,4-Dinitrophenol	1,100 U	1,200 U	140 U	1,100 U	1,300 U	1,300 U	1,100 U	1,100 U	n.a.	n.a.	n.a.
2,4-Dinitrotoluene	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
2,6-Dinitrotoluene	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
2-Chloronaphthalene	22 U	24 U	2.7 U	22 U	25 U	26 U	22 U	22 U	n.a.	n.a.	n.a.
2-Chlorophenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	365	63,511	262,495
2-Methylnaphthalene	22 U	210	2.7 U	36	23,000	44,000	22 U	210	3,310	n.a.	n.a.
2-Methylphenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
2-Nitroaniline	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
2-Nitrophenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
3 & 4 Methylphenol	220 U	240 U	27 U	220 U	250 U	260 U	220 U	220 U	n.a.	n.a.	n.a.
3,3'-Dichlorobenzidine	220 U	240 U	27 U	R	250 U	260 U	220 U	220 U	n.a.	n.a.	n.a.
3-Nitroaniline	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
4,6-Dinitro-2-methylphenol	1,100 U	1,200 U	140 U	R	1,300 U	1,300 U	1,100 U	1,100 U	n.a.	n.a.	n.a.
4-Bromophenyl phenyl ether	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
4-Chloro-3-methylphenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
4-Chloroaniline	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	126	244,412	2,736,028
4-Chlorophenyl phenyl ether	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
4-Nitroaniline	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	30	n.a.	n.a.
4-Nitrophenol	1,100 U	1,200 U	140 U	1,100 U	1,300 U	1,300 U	1,100 U	1,100 U	n.a.	n.a.	n.a.
Acenaphthene	22 U	160	6.3	22 U	1,500	3,200	22 U	22 U	52,264	3,683,396	32,502,818
Acenaphthylene	22 U	24 U	2.7 U	5.7 J	25 U	26 U	22 U	22 U	78,017	n.a.	n.a.
Anthracene	14 J	91	2.7 U	7.1 J	700	250	22 U	6.5 J	1,040,119	21,899,672	100,000,000
Benzo[a]anthracene	27 U	120	3.4 U	38 J	210	53	28 U	29	422	150	2,300
Benzo[a]pyrene	33 U	85	4.1 U	58	110	39 U	33 U	43	42	15	230
Benzo[b]fluoranthene	22 U	52	2.7 U	59	110	26 U	22 U	52	422	150	2,300
Benzo[g,h,i]perylene	27 U	57	3.4 U	59	57	33 U	28 U	57	1,177,982	n.a.	n.a.
Benzo[k]fluoranthene	27 U	30 U	3.4 U	27 J	31 U	33 U	28 U	11 J	4,218	1,500	23,000
Benzoic acid	2,700 U	3,000 U	340 U	R	3,100 U	3,300 U	2,800 U	2,800 U	77,150	100,000,000	100,000,000
Benzyl alcohol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
Bis(2-chloroethoxy)methane	110 U	120 U	14 U	110 U	77 J	130 U	110 U	110 U	n.a.	n.a.	n.a.
Bis(2-chloroethyl)ether	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	0	211	616
Bis(2-chloroisopropyl) ether	160 U	180 U	21 U	160 U	190 U	200 U	170 U	170 U	n.a.	n.a.	n.a.
Bis(2-ethylhexyl) phthalate	1,600 U	1,800 U	44 J	1,600 U	1,900 U	2,000 U	1,700 U	1,700 U	11,836	35,000	140,000
Butyl benzyl phthalate	38 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	511,168	240,477	240,477
Carbazole	160 U	180 U	21 U	160 U	190 U	200 U	170 U	170 U	n.a.	n.a.	n.a.
Chrysene	27 U	180	3.4 U	48	360	120	28 U	37	33,366	14,762	234,414
Dibenz[a,h]anthracene	44 U	47 U	5.5 U	36 J	50 U	53 U	45 U	40 J	42	15	230
Dibenzofuran	110 U	120 U	14 U	110 U	130 U	130 U	110 U	38 J	6,099	145,284	1,737,888
Diethyl phthalate	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	27,531	49,000,000	100,000,000
Dimethyl phthalate	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	270,813	100,000,000	100,000,000
Di-n-butyl phthalate	220 U	69 U	9.8 U	74 J	250 U	260 U	220 U	58 U	30,989	n.a.	n.a.
Di-n-octyl phthalate	220 U	240 U	27 U	220 U	250 U	260 U	220 U	220 U	1,828,814	n.a.	n.a.
Fluoranthene	26	65	2.7 U	61 J	460	99	22 U	33	363,512	2,293,610	24,444,837
Fluorene	22 U	180	9.7	22 U	2,800	4,900	22 U	22 U	54,836	2,644,486	26,221,983
Hexachlorobenzene	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	43	304	1,197
Hexachlorobutadiene	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	38	6,236	24,554
Hexachlorocyclopentadiene	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	12	365,487	4,065,241
Hexachloroethane	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	138	34,741	136,801
Indeno[1,2,3-cd]pyrene	44 U	51 J	5.5 U	75 J	50 U	53 U	45 U	55 J	422	150	7,800
Isophorone	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
Naphthalene	22 U	81	2.7 U	19 J	3,600	4,700	22 U	100	1,144	124,798	208,984
Nitrobenzene	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
N-Nitrosodi-n-propylamine	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	n.a.	n.a.	n.a.
N-Nitrosodiphenylamine	55 U	59 U	6.9 U	54 U	63 U	66 U	56 U	55 U	0.002	99,261	390,861
Pentachlorophenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	9.1	2,979	9,998
Phenanthrene	22 U	420	2.7 U	43	5,800	3,800	22 U	89	79,042	n.a.	n.a.
Phenol	110 U	120 U	14 U	110 U	130 U	130 U	110 U	110 U	7,358	18,331,473	100,000,000
Pyrene	44	370	2.7 U	65	840	240	22 U	43	359,215	2,308,756	31,979,385

Key is on last page.

Sample ID:	07040119	07040120	07040122	07040124	07040125	07040127	07040129	07040111	ARARs		
Sample Location:	ESB-03 SB 11	ESB-04 SB 03	ESB-04 SB 07	ESB-05 SB 15	ESB-05 SB 23	ESB-06 SB 11	ESB-07 SB 13	RB-01 (Rinsate Blank)	Idaho REM	EPA Region 6 Residential ⁽¹⁾	EPA Region 6 Industrial ⁽²⁾
SVOCs (µg/kg)									(µg/L)		
1,2,4-Trichlorobenzene	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.22 U	690	142,520	264,776
1,2-Dichlorobenzene	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.22 U	5,253	278,923	372,612
1,3-Dichlorobenzene	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.22 U	229	68,534	144,219
1,4-Dichlorobenzene	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.22 U	76	3,197	8,067
1-Methylnaphthalene	10,000	1,000	12,000	2,200	79	8,300	2,800	0.012 J	n.a.	n.a.	n.a.
2,4,5-Trichlorophenol	130 U	R	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
2,4,6-Trichlorophenol	190 U	R	190 U	170 U	16 U	180 UJ	R	0.33 U	n.a.	n.a.	n.a.
2,4-Dichlorophenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.22 U	98	183,309	2,052,021
2,4-Dimethylphenol	130 UJ	R	130 U	110 U	11 U	120 UJ	110 U	1.1 U	n.a.	n.a.	n.a.
2,4-Dinitrophenol	1,300 UJ	R	1,300 UJ	1,100 UJ	110 UJ	1,200 UJ	R	2.8 U	n.a.	n.a.	n.a.
2,4-Dinitrotoluene	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
2,6-Dinitrotoluene	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
2-Chloronaphthalene	26 UJ	170 J	25 U	22 U	2.2 U	24 UJ	22 U	0.033 U	n.a.	n.a.	n.a.
2-Chlorophenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.22 U	365	63,511	262,495
2-Methylnaphthalene	15,000	1,400	18,000	2,900	110	9,800	2,900	0.016 J	3,310	n.a.	n.a.
2-Methylphenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.22 U	n.a.	n.a.	n.a.
2-Nitroaniline	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
2-Nitrophenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.22 U	n.a.	n.a.	n.a.
3 & 4 Methylphenol	260 UJ	R	250 U	220 U	22 U	240 UJ	R	0.44 U	n.a.	n.a.	n.a.
3,3'-Dichlorobenzidine	260 UJ	2,200 U	250 U	220 U	22 U	240 UJ	220 U	1.1 U	n.a.	n.a.	n.a.
3-Nitroaniline	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
4,6-Dinitro-2-methylphenol	1,300 U	R	1,300 U	1,100 U	110 U	1,200 UJ	R	2.2 U	n.a.	n.a.	n.a.
4-Bromophenyl phenyl ether	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
4-Chloro-3-methylphenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.22 U	n.a.	n.a.	n.a.
4-Chloroaniline	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	126	244,412	2,736,028
4-Chlorophenyl phenyl ether	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
4-Nitroaniline	130 UJ	1,100 U	130 U	110 U	5.4 J	120 UJ	110 U	0.33 U	3.0	n.a.	n.a.
4-Nitrophenol	1,300 U	R	1,300 U	1,100 U	110 U	1,200 UJ	R	1.1 U	n.a.	n.a.	n.a.
Acenaphthene	26 UJ	900	25 U	350	10	24 UJ	620	0.055 U	52,264	3,683,396	32,502,818
Acenaphthylene	26 UJ	220 U	25 U	22 U	2.2 U	24 UJ	22 U	0.044 U	78,017	n.a.	n.a.
Anthracene	180 J	480	530	120	3.7	510 J	220	0.022 U	1,040,119	21,899,672	100,000,000
Benzo[a]anthracene	120 J	860	190	38	1.3 J	130 J	84	0.033 U	422	150	2,300
Benzo[a]pyrene	81 J	650	110	37	3.3 J	62 J	44	0.022 U	42	15	230
Benzo[b]fluoranthene	80 J	490	85	30	2.2 U	59 J	48	0.044 U	422	150	2,300
Benzo[g,h,i]perylene	85 J	480	61	29	2.7 U	43 J	37	0.033 U	1,177,982	n.a.	n.a.
Benzo[k]fluoranthene	32 UJ	280 U	31 U	28 U	2.7 U	10 J	9.8 J	0.033 U	4,218	1,500	23,000
Benzoic acid	3,200 UJ	R	3,100 U	2,800 U	270 U	3,000 UJ	R	1.1 U	77,150	100,000,000	100,000,000
Benzyl alcohol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.015 J	n.a.	n.a.	n.a.
Bis(2-chloroethoxy)methane	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
Bis(2-chloroethyl)ether	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	0	211	616
Bis(2-chloroisopropyl) ether	190 UJ	1,700 U	190 U	170 U	16 U	180 UJ	160 U	0.22 U	n.a.	n.a.	n.a.
Bis(2-ethylhexyl) phthalate	1,900 UJ	17,000 U	1,900 U	1,700 U	160 U	1,800 UJ	1,600 U	1.7 U	11,836	35,000	140,000
Butyl benzyl phthalate	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.33 U	511,168	240,477	240,477
Carbazole	190 UJ	950 J	190 U	170 U	16 U	180 UJ	160 U	0.22 U	n.a.	n.a.	n.a.
Chrysene	290 J	1,400	370	53	1.7 J	180 J	120	0.022 U	33,366	14,762	234,414
Dibenz[a,h]anthracene	52 UJ	440 U	50 U	44 U	4.3 U	49 UJ	43 U	0.033 U	42	15	230
Dibenzofuran	130 UJ	200 J	130 U	110 U	11 U	120 UJ	110 U	0.22 U	6,099	145,284	1,737,888
Diethyl phthalate	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.06 J	27,531	49,000,000	100,000,000
Dimethyl phthalate	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.029 J	270,813	100,000,000	100,000,000
Di-n-butyl phthalate	260 UJ	2,200 U	250 U	220 U	22 U	240 UJ	220 U	0.22 U	30,989	n.a.	n.a.
Di-n-octyl phthalate	260 UJ	2,200 U	250 U	220 U	22 U	240 UJ	220 U	0.22 U	1,828,814	n.a.	n.a.
Fluoranthene	170 J	1,400	310	70	2.4	520 J	340	0.028 U	363,512	2,293,610	24,444,837
Fluorene	2,300 J	1,000	2,900	600	21	1,400 J	1,700	0.0076 J	54,836	2,644,486	26,221,983
Hexachlorobenzene	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.22 U	43	304	1,197
Hexachlorobutadiene	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.33 U	38	6,236	24,554
Hexachlorocyclopentadiene	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	1.1 U	12	365,487	4,065,241
Hexachloroethane	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.33 U	138	34,741	136,801
Indeno[1,2,3-cd]pyrene	52 UJ	440 U	50 U	44 U	4.3 U	43 J	43 U	0.033 U	422	150	7,800
Isophorone	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
Naphthalene	6,000 J	240	3,100	410	15	2,600 J	1,000	0.0079 J	1,144	124,798	208,984
Nitrobenzene	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
N-Nitrosodi-n-propylamine	130 UJ	1,100 U	130 U	110 U	11 U	120 UJ	110 U	0.22 U	n.a.	n.a.	n.a.
N-Nitrosodiphenylamine	65 UJ	550 U	63 U	56 U	5.4 U	61 UJ	54 U	0.22 U	0	99,261	390,861
Pentachlorophenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.39 U	9.1	2,979	9,998
Phenanthrene	3,600 J	3,300	4,400	960	37	4,600 J	2,500	0.0093 J	79,042	n.a.	n.a.
Phenol	130 UJ	R	130 U	110 U	11 U	120 UJ	R	0.33 U	7,358	18,331,473	100,000,000
Pyrene	510 J	3,200	690	140	4.7	770 J	430	0.033 U	359,215	2,308,756	31,979,385

Notes:

Italics indicates that the compound was not detected.

Bold type indicates that the compound exceeds the Idaho REM.

Underline type indicates that the compound exceeds the EPA Human Health Medium-Specific Screening Level for Residential Properties

Highlighted type indicates that the compound exceeds the EPA Human Health Medium-Specific Screening Level for Industrial Properties

(1) Idaho Risk Evaluation Manual (DEQ 2004).

(2) EPA Region 6 Human Health Medium-Specific Screening Levels (EPA 2007a).

Key:

ARAR =applicable or relevant and appropriate requirement

EPA =Environmental Protection Agency

ID = identification

J = estimated value

µg/kg = microgram per kilogram

µg/L = microgram per liter

n.a. =not available

R = rejected value

REM =Risk Evaluation Manual

SVOC = semivolatile organic compound

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

Table 4-4 Summary of PCB and NWTPH-Dx Results in Soil Samples Avery Landing Site Avery, Idaho											
Sample ID:	07040102	07040104	07040106	07040108	07040110	07040114	07040116	07040117	ARARs		
Sample Location:	EMW-01 SB 02	EMW-02 SB 07	EMW-03 SB 11	EMW-04 SB 03	EMW-05 SB 09	EMW-06 SB 09	ESB-01 SB 07	ESB-02 SB 03	Idaho REM Residential ⁽¹⁾	EPA Region 6 Residential ⁽²⁾	EPA Region 6 Industrial ⁽²⁾
PCBs (µg/kg)											
Aroclor-1016	11 U	12 U	13 U	10 U	13 U	13 U	11 U	11 U	2,334	3,933	23,606
Aroclor-1221	11 U	12 U	13 U	10 U	13 U	13 U	11 U	11 U	2.9	222	826
Aroclor-1232	11 U	12 U	13 U	10 U	13 U	13 U	11 U	11 U	n.a.	n.a.	n.a.
Aroclor-1242	11 U	12 U	13 U	10 U	13 U	13 U	11 U	11 U	3.2	222	826
Aroclor-1248	11 U	12 U	13 U	10 U	13 U	13 U	11 U	11 U	137	222	826
Aroclor-1254	11 U	12 U	13 U	10 U	13 U	13 U	11 U	11 U	740	222	826
Aroclor-1260	9.8 J	12 U	130	19	20 J	9.2 J	11 U	4.4 J	147	222	826
NWTPH-Dx (mg/kg)											
Sample ID:	07040102	07040105	07040106	07040108	07040110	07040114	07040116	07040117	ARARs		
Sample Location:	EMW-01 SB 02	EMW-02 SB 05	EMW-03 SB 11	EMW-04 SB 03	EMW-05 SB 09	EMW-06 SB 09	ESB-01 SB 07	ESB-02 SB 03	Idaho REM Residential ⁽¹⁾	EPA Region 6 Residential ⁽²⁾	EPA Region 6 Industrial ⁽²⁾
Diesel-Range Organics	1,500	7,200	40	160	12,000	6,900	650	Not Analyzed	n.a.	n.a.	n.a.
Oil-Range Organics	12,000	5,200	140 U	890	2,000	3,600	2,500	Not Analyzed	n.a.	n.a.	n.a.

Key is on last page.

Table 4-4 (continued) Summary of PCB and NWTPH-Dx Results in Soil Samples Avery Landing Site Avery, Idaho											
Sample ID:	07040119	07040120	07040122	07040124	07040125	07040127	07040129	07040111	ARARs		
Sample Location:	ESB-03 SB 11	ESB-04 SB 03	ESB-04 SB 07	ESB-05 SB 15	ESB-05 SB 23	ESB-06 SB 11	ESB-07 SB 13	RB-01 (Rinsate Blank)	Idaho REM Residential ⁽¹⁾	EPA Region 6 Residential ⁽²⁾	EPA Region 6 Industrial ⁽²⁾
PCBs (µg/kg)									(µg/L)		
Aroclor-1016	<i>13 U</i>	<i>10 U</i>	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	<i>12 U</i>	<i>11 U</i>	<i>0.055 UJ</i>	2,334	3,933	23,606
Aroclor-1221	<i>13 U</i>	<i>10 U</i>	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	<i>12 U</i>	<i>11 U</i>	<i>0.055 UJ</i>	2.9	222	826
Aroclor-1232	<i>13 U</i>	<i>10 U</i>	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	<i>12 U</i>	<i>11 U</i>	<i>0.055 UJ</i>	n.a.	n.a.	n.a.
Aroclor-1242	<i>13 U</i>	<i>10 U</i>	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	<i>12 U</i>	<i>11 U</i>	<i>0.055 UJ</i>	3.2	222	826
Aroclor-1248	<i>13 U</i>	<i>10 U</i>	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	<i>12 U</i>	<i>11 U</i>	<i>0.055 UJ</i>	137	222	826
Aroclor-1254	<i>13 U</i>	<i>10 U</i>	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	<i>12 U</i>	<i>11 U</i>	<i>0.055 UJ</i>	740	222	826
Aroclor-1260	<i>13 U</i>	22	<i>13 U</i>	<i>11 U</i>	<i>10 U</i>	6.8 J	6.5 J	<i>0.055 UJ</i>	147	222	826
NWTPH-Dx (mg/kg)									(µg/L)		
Sample ID:	07040119	07040120	07040122	07040124	07040125	07040127	07040129	07040111	ARARs		
Sample Location:	ESB-03 SB 11	ESB-04 SB 03	ESB-04 SB 07	ESB-05 SB 15	ESB-05 SB 23	ESB-06 SB 11	ESB-07 SB 13	RB-01	Idaho REM Residential ⁽¹⁾	EPA Region 6 Residential ⁽²⁾	EPA Region 6 Industrial ⁽²⁾
Diesel-Range Organics	17,000	3,700	13,000	3,100	Not Analyzed	7,800	6,600	<i>48 U</i>	n.a.	n.a.	n.a.
Oil-Range Organics	6,700	3,300	7,000	1,500	Not Analyzed	3,100	1,900	<i>190 U</i>	n.a.	n.a.	n.a.

Notes: Italics indicate Bold type indicates a detected compound.
 Bold type indicates that the compound exceeds the Idaho REM.
 Underline type indicates that the compound exceeds the EPA Human Health Medium-Specific Screening Level for Residential Properties
 Highlighted type indicates that the compound exceeds the EPA Human Health Medium-Specific Screening Level for Industrial Properties
 (1) Idaho Risk Evaluation Manual (DEQ 2004).
 (2) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

Key:

- ARAR = applicable or relevant and appropriate requirement
- ID = identification
- J = estimated value
- µg/kg = microgram per kilogram
- µg/L = microgram per liter
- mg/kg = milligrams per kilogram
- NWTPH-Dx = Northwest Total Petroleum Hydrocarbon, Diesel Range Extended
- PCBs = polychlorinated biphenyls
- U = not detected (at the indicated reporting limit)
- UJ = not detected (estimated reporting limit)

Table 4-5

**Summary of TAL Metal Results in Soil Samples
Avery Landing Site
Avery, Idaho**

Sample ID:	07040102	07040105	07040106	07040108	07040110	07040113	07040116	07040117	ARARs		
Sample Location:	EMW-01 SB 02	EMW-02 SB 05	EMW-03 SB 11	EMW-04 SB 03	EMW-05 SB 09	EMW-06 SB 07	ESB-01 SB 07	ESB-02 SB 03	Idaho REM Residential (1)	EPA Region 6 Residential (2)	EPA Region 6 Industrial (3)
TAL Metals (mg/kg)											
Aluminum	11,200	19,500	14,900	11,200	13,500	15,800	14,100	12,100	n.a.	76,188	100,000
Antimony	0.2 <i>UJ</i>	0.074 J	0.1 J	1.3 J	0.21 J	0.12 J	0.17 J	1.1 J	4.8	31	450
Arsenic ⁽⁴⁾	17.3 J	8.6 J	7.3 J	12 J	5.7 J	7.5 J	15.7 J	16.9 J	0.39	0.39	1.8
Barium	63.2	113	92.8	193	76.3	96	125	174	896	16,000	100,000
Beryllium	0.4 J	0.67 J	0.47 J	0.62 J	0.57 J	0.54 J	0.46	0.46 J	1.6	150	2,200
Cadmium	0.47 J	0.52 J	0.45 J	0.81 J	0.39 J	0.43 J	0.53 J	0.78 J	1.4	39	560
Calcium	862 J	2,720 J	1,480 J	6,390 J	2,310 J	1,910 J	1,620 J	4,370 J	n.a.	n.a.	n.a.
Chromium	18.8	18.4	11.9	15.1	13.2	12.8	12.1	12.3	2,135 ⁽⁴⁾	210	500
Cobalt	8.8	8.4	6.2	6.5	6.9	8.5	7.1	19.2	n.a.	n.a.	n.a.
Copper	23.7	21.5	20.8	101	25.1	20.7	20.5	71.6	921	2,900	42,000
Iron	24,600	20,000	15,100	19,700	18,000	16,900	18,900	19,300	5.8	54,750	100,000
Lead	11	9.5	9.3	145	6.1	8.3	17.3	159	50	400	800
Magnesium	3,420 J	7,760 J	5,830 J	8,060 J	6,190 J	6,570 J	7,460 J	6,590 J	n.a.	n.a.	n.a.
Manganese	403 J	260 J	188 J	354 J	271 J	319 J	200 J	288 J	223	3,200	47,000
Mercury	0.0199 J	0.0124 J	0.0114 J	0.0553 J	0.0119 J	0.0105 J	0.0064 <i>UJ</i>	0.117	0.0051	23	340
Nickel	16.5	16.3	13.3	24.9	13.1	13.4	16.1	32.3	59	1,600	23,000
Potassium	1,600 J	2,940 J	1,980 J	3,250 J	2,460 J	1,720 J	3,500 J	2,740 J	n.a.	n.a.	n.a.
Selenium	0.13 J	0.28 J	0.36 J	0.22 J	0.38 J	0.39 J	0.23 J	0.21 J	2.0	390	5,700
Silver	0.14 J	0.15 J	0.11 J	0.16 J	0.1 J	0.11 J	0.12 J	0.17 J	0.19	390	5,700
Sodium	52.2 <i>U</i>	477	86.3 <i>U</i>	292	113 <i>U</i>	106 <i>U</i>	70.4 <i>U</i>	139 <i>U</i>	n.a.	n.a.	n.a.
Thallium	0.11 J	0.2 J	0.15 J	0.16 J	0.16 J	0.16 J	0.17 J	0.14 J	1.6	5.5	79
Vanadium	11.9	25.4	20.5	30.2	25.6	23	22.1	21.9	n.a.	n.a.	n.a.
Zinc	48.7	47.3	42.2	101	34.9	42.5	26	72.3	886	23,000	100,000

Key is at end of table.

Table 4-5 (continued)										
Summary of TAL Metal Results in Soil Samples Avery Landing Site Avery, Idaho										
Sample ID:	07040119	07040120	07040122	07040124	07040127	07040129	07040111	ARARs		
Sample Location:	ESB-03 SB 11	ESB-04 SB 03	ESB-04 SB 07	ESB-05 SB 15	ESB-06 SB 11	ESB-07 SB 13	RB-01 (Rinsate Blank)	Idaho REM Residential ⁽¹⁾	EPA Region 6 Residential ⁽²⁾	EPA Region 6 Industrial ⁽²⁾
TAL Metals (mg/kg)								(µg/L)		
Aluminum	13,100	10,200	13,000	11,100	12,700	7,760	32 <i>U</i>	n.a.	76,188	100,000
Antimony	0.099 J	0.49 J	0.063 J	0.059 J	0.07 J	0.066 J	0.626 <i>U</i>	4.8	31	450
Arsenic ⁽⁴⁾	<u>4.2 J</u>	<u>16.1 J</u>	<u>5.4 J</u>	<u>17 J</u>	<u>6.1 J</u>	<u>5.1 J</u>	0.1 <i>U</i>	0.39	0.39	1.8
Barium	65.6	175	65.8	62.4	69.2	44.3	0.4 <i>U</i>	896	16,000	100,000
Beryllium	0.46 J	0.42 J	0.49	0.4 J	0.39 J	0.24 J	0.043 <i>U</i>	1.6	150	2,200
Cadmium	0.36 J	0.86	0.36 J	0.29 J	0.41 J	0.23 J	0.094 <i>U</i>	1.4	39	560
Calcium	1,930 J	3,110 J	1,530 J	1,740 J	1,290 J	1,580 J	116 <i>U</i>	n.a.	n.a.	n.a.
Chromium	10.9	12	11.2	10.8	10.7	7.7	0.569 <i>U</i>	2,135 ⁽³⁾	210	500
Cobalt	5.5	6.3	7.1	7.9	6.9	5.6	0.028 <i>U</i>	n.a.	n.a.	n.a.
Copper	18.7	44.7	18.1	21.3	20.2	43	0.52 <i>U</i>	921	2,900	42,000
Iron	15,000	16,300	16,800	18,400	17,100	15,100	28.1 J	5.8	54,750	100,000
Lead	7.7	69.1	4.3	2.3	6.3	4.7	0.075 <i>U</i>	50	400	800
Magnesium	5,750 J	4,180 J	5,320 J	6,670 J	5,290 J	4,170 J	4.54 J	n.a.	n.a.	n.a.
Manganese	98.3 J	315 J	240 J	201 J	221 J	120 J	0.464 J	223	3,200	47,000
Mercury	0.00713 <i>UJ</i>	0.0312 J	0.00697 <i>UJ</i>	0.00625 <i>UJ</i>	0.00691 <i>UJ</i>	0.00609 <i>UJ</i>	0.018 <i>UJ</i>	0.0051	23	340
Nickel	12.9	17.8	12.9	15	12.1	8.7	0.11 <i>U</i>	59	1,600	23,000
Potassium	2,060 J	1,920 J	1,960 J	3,240 J	1,940 J	1,960 J	11 <i>U</i>	n.a.	n.a.	n.a.
Selenium	0.3 J	0.31 J	0.21 J	0.19 J	0.26 J	0.16 J	0.229 <i>UJ</i>	2.0	390	5,700
Silver	0.078 J	0.14 J	0.081 J	0.07 J	0.086 J	0.055 J	0.085 <i>U</i>	0.19	390	5,700
Sodium	89.5 <i>U</i>	203 <i>U</i>	101 <i>U</i>	89.7 <i>U</i>	89.5 <i>U</i>	108 <i>U</i>	203 J	n.a.	n.a.	n.a.
Thallium	0.13 J	0.12 J	0.16 J	0.26 J	0.15 J	0.094 J	0.044 <i>UJ</i>	1.6	5.5	79
Vanadium	23.5	29.9	22.3	19.5	21	28.3	0.116 J	n.a.	n.a.	n.a.
Zinc	34.4	111	29.5	18.4	33.4	20.7	1.87 J	886	23,000	100,000

Notes: Italics indicates the compound was not detected.

Bold type indicates the compound exceeds the Idaho REM guideline.

Underline type indicates the compound exceeds the EPA Region 6 residential guideline.

Highlighted type indicates the compound exceeds the EPA Region 6 industrial guideline.

(1) Idaho Risk Evaluation Manual (DEQ 2004).

(2) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

(3) The Idaho REM standard for chromium is for chromium (III).

(4) The upper limit of background soil concentrations for arsenic in the nearby Coeur d'Alene and Spokane River basins is 22 mg/kg (URS Greiner 2001).

Key:

ARAR = applicable or relevant and appropriate requirement

ID = identification

J = estimated value

µg/L = microgram per liter

mg/kg = milligrams per kilogram

n.a. = not available

REM = Risk Evaluation Manual

TAL = target analyte list

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

Table 4-6 Summary of Volatile Organic Compound Results in Groundwater and Domestic Well Samples Avery Landing Site Avery, Idaho												
Sample Number:	07040135	07040136	07040137	07040138	07040139	07040140	07040141	07040142	07040143	ARARs		
Sample Location:	EMW-01	EMW-02	EMW-03	EMW-04	EMW-05	EMW-06	HC-1R	MW-5	DW-01	Groundwater Standard (MCL) ⁽¹⁾	Idaho REM ⁽²⁾	EPA Region 6 Tap Water ⁽³⁾
VOCs (µg/L)												
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	200	200	836
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	0.3	0.3
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	1.2
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	1,040	1,217
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	7.0	7.0	340
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	0.7
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	70	70	61
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	100	0.6	110
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	1.0
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	0.6	0.7
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	n.a.	0.7
2-Butanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	n.a.	6,260	7,100
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	n.a.	n.a.	n.a.
4-Methyl-2-pentanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	n.a.	n.a.	n.a.
Acetone	5.0 U	5.0 U	2.8 J	3.2 J	5.0 U	5.0 U	1.6 J	5.0 U	5.0 U	n.a.	9,390	5,475
Benzene	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	1.2
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	0.9	1.1
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	100 ⁽⁴⁾	7.1	8.5
Bromomethane	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	n.a.	15	8.7
Carbon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	1,040	1,043
Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	0.5
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.4	3.6	1.0 U	1.0 U	1.0 U	100 ⁽⁵⁾	100	91
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	19	n.a.
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	100 ⁽⁴⁾	1.8	0.2
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	4.3	2.1
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	n.a.	n.a.
Dichlorodifluoromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	2,090	395
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	700	700	1,340
Methylene chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	7.5	8.9
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	100	100	1,641
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	0.1
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1,000	1,000	2,281
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0	5.0	0.2
Trichlorofluoromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	n.a.	3,130	1,288
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0	2.0	0.0
m,p-Xylene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10,000 ⁽⁶⁾	10,000 ⁽⁶⁾	200 ⁽⁶⁾
o-Xylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10,000 ⁽⁶⁾	10,000 ⁽⁶⁾	200 ⁽⁶⁾

Note:

Italics indicates the compound was not detected.

Bold type indicates the compound exceeded the Idaho REM guideline.

Underline type indicates that the compound exceeds the groundwater standard (MCL).

Highlighted type indicates that the compound exceeds the EPA Region 6 tap water guideline.

(1) Groundwater Standards include the National Primary and Secondary Drinking Water Regulations, which include the federal MCLs (EPA 2003), and the state Primary and Secondary Constituent Standards for Groundwater (IDAPA 2006). Unless otherwise indicated, the state and federal standards are the same.

(2) Idaho Risk Evaluation Manual (DEQ 2004).

(3) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

(4) The bromoform and chloroform standards are from the state regulations, only.

(5) The chlorobenzene standard is from the federal regulations, only.

(6) Xylene standards are for total xylene.

Key:

ARAR = applicable or relevant and appropriate requirement

ID = identification

J = estimated value

µg/L = microgram per liter

REM = Risk Evaluation Manual

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

Sample ID:	07040135	07040136	07040137	07040138	07040139	07040140	07040141	07040142	07040143	ARARs		
Sample Location:	EMW-01	EMW-02	EMW-03	EMW-04	EMW-05	EMW-06	HC-1R	MW-5	DW-01	Groundwater Standard (MCL) ⁽¹⁾	Idaho REM ⁽²⁾	EPA Region 6 Tap Water ⁽³⁾
SVOCs (µg/L)												
1,2,4-Trichlorobenzene	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	70	70	8.2
1,2-Dichlorobenzene	0.2 U	0.2 U	0.037 J	0.21 U	0.21	0.53 J	0.048 J	0.21 U	0.2 U	n.a.	600	49
1,3-Dichlorobenzene	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	9.4	14
1,4-Dichlorobenzene	0.2 U	0.2 U	0.2 U	0.21 U	0.051 J	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	75	2.8
1-Methylnaphthalene	0.0081 J	20	0.03 U	0.031 U	29	210	0.03 U	0.031 U	0.03 U	n.a.	n.a.	n.a.
2,4,5-Trichlorophenol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	n.a.	n.a.
2,4,6-Trichlorophenol	0.3 U	R	R	0.31 U	R	R	R	0.31 U	0.3 U	n.a.	n.a.	n.a.
2,4-Dichlorophenol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	31	110
2,4-Dimethylphenol	1.0 U	R	R	1.0 U	R	R	R	1.0 U	1.0 U	n.a.	n.a.	n.a.
2,4-Dinitrophenol	2.5 U	R	R	2.6 U	R	R	R	2.6 U	2.5 U	n.a.	n.a.	n.a.
2,4-Dinitrotoluene	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
2,6-Dinitrotoluene	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
2-Chloronaphthalene	0.03 U	0.029 U	0.03 U	0.031 U	0.03 U	0.28 U	0.03 U	0.031 U	0.03 U	n.a.	n.a.	n.a.
2-Chlorophenol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	52	30
2-Methylnaphthalene	0.0095 J	4.7	0.1 U	0.1 U	34	270	0.1 U	0.1 U	0.1 U	n.a.	42	n.a.
2-Methylphenol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	n.a.	n.a.
2-Nitroaniline	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
2-Nitrophenol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	n.a.	n.a.
3 & 4 Methylphenol	0.4 U	R	R	0.41 U	R	R	R	0.41 U	0.4 U	n.a.	n.a.	n.a.
3,3'-Dichlorobenzidine	1.0 U	0.98 U	1.0 U	1.0 U	1.0 U	9.5 U	1.0 U	1.0 U	1.0 U	n.a.	n.a.	n.a.
3-Nitroaniline	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
4,6-Dinitro-2-methylphenol	2 U	R	R	2.1 U	R	19 J	R	2.1 U	2.0 U	n.a.	n.a.	n.a.
4-Bromophenyl phenyl ether	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
4-Chloro-3-methylphenol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	n.a.	n.a.
4-Chloroaniline	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	42	146
4-Chlorophenyl phenyl ether	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
4-Nitroaniline	0.3 U	0.29 U	0.3 U	0.31 U	0.3 U	2.8 U	0.3 U	0.31 U	0.3 U	n.a.	1.5	n.a.
4-Nitrophenol	R	R	R	1.0 U	R	R	R	1.0 U	1.0 U	n.a.	n.a.	n.a.
Acenaphthene	0.015 J	2.4	0.11	0.17	2.9	9.3	0.6	0.052 U	0.05 U	n.a.	626	365
Acenaphthylene	0.04 U	0.039 U	0.041 U	0.041 U	0.04 U	0.38 U	0.04 U	0.041 U	0.04 U	n.a.	626	n.a.
Anthracene	0.02 U	0.73	0.012 J	0.021 U	0.12	4.4	0.019 J	0.021 U	0.0026 J	n.a.	3,130	1,825
Benzo[a]anthracene	0.03 U	0.37	0.03 U	0.017 J	0.03 U	1.6	0.03 U	0.031 U	0.03 U	n.a.	0.077	0.029
Benzo[a]pyrene	0.02 U	0.20	0.02 U	0.021 U	0.02 U	0.85	0.02 U	0.021 U	0.02 U	0.20	0.20	0.0029
Benzo[b]fluoranthene	0.04 U	0.12	0.041 U	0.038 J	0.04 U	0.84	0.04 U	0.041 U	0.04 U	n.a.	0.077	0.15
Benzo[g,h,i]perylene	0.03 U	0.11	0.03 U	0.037	0.03 U	0.51	0.03 U	0.031 U	0.03 U	n.a.	313	0.029
Benzo[k]fluoranthene	0.03 U	0.021 J	0.03 U	0.031 U	0.03 U	0.28 U	0.03 U	0.031 U	0.03 U	n.a.	0.77	1.5
Benzoic acid	1.0 U	R	R	1.0 U	R	R	R	1.0 U	1.0 U	n.a.	41,700	146,000
Benzyl alcohol	0.2 U	R	R	0.21 U	R	R	R	0.21 U	0.2 U	n.a.	n.a.	n.a.
Bis(2-chloroethoxy)methane	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
Bis(2-chloroethyl) ether	0.2 U	0.2 U	0.028 J	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	0.05	0.060
Bis(2-chloroisopropyl) ether	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
Bis(2-ethylhexyl) phthalate	16	1.5 U	120	85	390	14 U	210	71	1.5 U	6.0	6.0	4.8
Butyl benzyl phthalate	0.3 U	0.29 U	0.3 U	0.31 U	0.3 U	2.8 U	0.3 U	0.31 U	0.3 U	n.a.	2,090	7,300
Carbazole	0.2 U	0.48	0.2 U	0.022 J	0.13 J	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
Chrysene	0.02 U	0.51	0.02 U	0.067	0.02 U	3.0	0.02 U	0.021 U	0.02 U	n.a.	7.7	2.9
Dibenz[a,h]anthracene	0.03 U	0.029 U	0.03 U	0.031 U	0.03 U	0.28 U	0.03 U	0.031 U	0.03 U	n.a.	0.008	0.00
Dibenzofuran	0.2 U	0.2 U	0.2 U	0.02 J	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	42	12
Diethyl phthalate	0.014 J	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.018 J	n.a.	8,340	29,000
Dimethyl phthalate	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	104,000	370,000
Di-n-butyl phthalate	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	2.5	n.a.	1,040	n.a.
Di-n-octyl phthalate	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.08 J	0.21 U	0.2 U	n.a.	417	n.a.
Fluoranthene	0.0097 J	0.26	0.025 U	0.034	0.037	4.2	0.025 U	0.026 U	0.025 U	n.a.	417	1,460
Fluorene	0.0068 J	2.1	0.14	0.4	3.9	34	0.4	0.031 U	0.03 U	n.a.	417	243
Hexachlorobenzene	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	1.0	1.0	0.042
Hexachlorobutadiene	0.3 U	0.29 U	0.3 U	0.31 U	0.3 U	2.8 U	0.3 U	0.31 U	0.3 U	n.a.	1.0	0.86
Hexachlorocyclopentadiene	1.0 U	0.98 U	1.0 U	1.0 U	1.0 U	9.5 U	1.0 U	1.0 U	1.0 U	n.a.	50	219
Hexachloroethane	0.3 U	0.29 U	0.3 U	0.31 U	0.3 U	2.8 U	0.3 U	0.31 U	0.3 U	n.a.	4.0	4.8
Indeno[1,2,3-cd]pyrene	0.03 U	0.029 U	0.03 U	0.031 U	0.03 U	0.28 U	0.03 U	0.031 U	0.03 U	n.a.	0.077	0.029
Isophorone	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
Naphthalene	0.01 J	5.0	0.2 U	0.21 U	2.1	63	0.2 U	0.21 U	0.2 U	n.a.	209	6.2
Nitrobenzene	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
N-Nitrosodi-n-propylamine	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	1.9 U	0.2 U	0.21 U	0.2 U	n.a.	n.a.	n.a.
N-Nitrosodiphenylamine	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	12	0.2 U	0.21 U	0.2 U	n.a.	11	14
Pentachlorophenol	0.35 U	R	R	0.36 U	R	3.3 U	R	0.36 U	0.35 U	1.0	1.0	0.56
Phenanthrene	0.0046 J	4.0	0.021 J	0.078	2.3	59	0.026 J	0.041 U	0.04 U	n.a.	313	n.a.
Phenol	0.3 U	R	R	0.31 U	R	R	R	0.31 U	0.3 U	n.a.	3,130	10,950
Pyrene	0.015 J	1.2	0.03 U	0.071	0.041	8.6	0.03 U	0.031 U	0.03 U	n.a.	313	183

Notes: Italics indicates that the compound was not detected.

Bold type indicates that the compound exceeds the Idaho REM.

Underline type indicates that the compound exceeds the groundwater standard (MCL).

Highlighted type indicates that the compound exceeds the EPA Region 6 tap water guideline.

(1) Groundwater Standards include the National Primary and Secondary Drinking Water Regulations, which include the federal MCLs (EPA 2003), and the state Primary and Secondary Constituent Standards for Groundwater (IDAPA 2006). Unless otherwise indicated, the state and federal standards are the same.

(2) Idaho Risk Evaluation Manual (DEQ 2004).

(3) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

Key:

ARAR = applicable or relevant and appropriate requirement
EPA = Environmental Protection Agency
ID = identification
J = estimated value
µg/L = microgram per liter
R = rejected value
REM = Risk Evaluation Memo
SVOC = semivolatile organic compound
U = not detected (at the indicated reporting limit)
UJ = not detected (estimated reporting limit)

Table 4-8

**Summary of PCB and NWTPH-Dx Results in Groundwater and Domestic Well Samples
Avery Landing Site
Avery, Idaho**

Sample ID:	07040135	07040136	07040137	07040138	07040139	07040140	07040141	07040142	07040143	ARARs		
Sample Location:	EMW-01	EMW-02	EMW-03	EMW-04	EMW-05	EMW-06	HC-1R	MW-5	DW-01	Groundwater Standard (MCL) ⁽¹⁾	Idaho REM ⁽²⁾	EPA Region 6 Tap Water ⁽³⁾
PCBs (µg/L)												
Aroclor-1016	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	<i>0.053 U</i>	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	0.73	0.96
Aroclor-1221	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	<i>0.053 U</i>	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	0.0279	0.0336
Aroclor-1232	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	<i>0.053 U</i>	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	n.a.	n.a.
Aroclor-1242	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	<i>0.053 U</i>	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	0.0279	0.0336
Aroclor-1248	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	<i>0.053 U</i>	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	0.0279	0.0336
Aroclor-1254	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	<i>0.053 U</i>	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	0.2090	0.0336
Aroclor-1260	<i>0.058 U</i>	<i>0.051 UJ</i>	<i>0.051 U</i>	<i>0.05 UJ</i>	<i>0.051 UJ</i>	0.028 J	<i>0.051 UJ</i>	<i>0.05 U</i>	<i>0.05 U</i>	0.5	0.0279	0.0336
NWTPH-Dx (µg/L)												
Sample ID:	07040135	07040136	07040137	07040138	07040139	07040140	07040141	07040142	07040143	ARARs		
Sample Location:	EMW-01	EMW-02	EMW-03	EMW-04	EMW-05	EMW-06	HC-1R	MW-5	DW-01	MCL ⁽¹⁾	Idaho REM ⁽²⁾	EPA Region 6 Tap Water ⁽³⁾
Diesel-Range Organics	83	5,500	780	3,900	2,000	110,000	1,300	<i>50 U</i>	79	n.a.	n.a.	n.a.
Oil-Range Organics	<i>210 U</i>	3,800	1,000	4,100	780	45,000	720	260	<i>190 U</i>	n.a.	n.a.	n.a.

Notes: Italics indicates that the compound was not detected.

Bold type indicates that the compound exceeds the Idaho REM.

Underline type indicates that the compound exceeds the groundwater standard (MCL).

Highlighted type indicates that the compound exceeds the EPA Region 6 tap water guideline.

(1) Groundwater Standards include the National Primary and Secondary Drinking Water Regulations, which include the federal MCLs (EPA 2003), and the state Primary and Secondary Constituent Standards for Groundwater (IDAPA 2006). Unless otherwise indicated, the state and federal standards are the same.

(2) Idaho Risk Evaluation Manual (DEQ 2004).

(3) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

Key:

ARAR = applicable or relevant and appropriate requirement

ID = identification

J = estimated value

µg/L = microgram per liter

n.a. = not available

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon, Diesel Range Extended

PCBs = polychlorinated biphenyls

REM

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

<p align="center">Table 4-9</p> <p align="center">Summary of TAL Metal Results in Groundwater and Domestic Well Samples</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>												
Sample ID:	07040135	07040136	07040137	07040138	07040139	07040140	07040141	07040142	07040143	ARARs		
Sample Location:	EMW-01	EMW-02	EMW-03	EMW-04	EMW-05	EMW-06	HC-1R	MW-5	DW-01	Groundwater Standard (MCL) ⁽¹⁾	Idaho REM ⁽²⁾	EPA Region 6 Tap Water ⁽³⁾
TAL Metals (µg/L)												
Aluminum	32 <i>U</i>	<u>2,050</u>	74.9	121	634	<u>32,200</u>	32 <i>U</i>	79.7	32 <i>U</i>	200 ⁽⁴⁾	n.a.	36,500
Antimony	<i>0.218 UJ</i>	<i>0.537 U</i>	<i>0.219 UJ</i>	<i>0.452 U</i>	<i>0.0949 UJ</i>	<i>1.87 U</i>	<i>0.465 U</i>	<i>0.222 UJ</i>	<i>0.0574 U</i>	6.0	6.0	15
Arsenic	0.303 J	88.6	30.7	13.7	51.4	58.6	46.6	0.655 J	1.06	50 / 10 ⁽⁵⁾	10	0.045
Barium	12	61.1	84.4	113	72.1	305	109	9.3	21.1 J	2,000	2,000	7,300
Beryllium	<i>0.043 U</i>	0.106 J	<i>0.043 U</i>	<i>0.043 U</i>	<i>0.043 U</i>	1.84 J	<i>0.043 U</i>	<i>0.043 U</i>	<i>0.043 U</i>	4.0	4.0	73
Cadmium	<i>0.094 U</i>	0.142 J	<i>0.094 U</i>	<i>0.094 U</i>	<i>0.094 U</i>	1.07	<i>0.094 U</i>	<i>0.094 U</i>	<i>0.094 U</i>	5.0	5.0	18
Calcium	21,800	56,600	59,400	82,300	44,300	67,300	81,700	22,700	46,600	n.a.	n.a.	n.a.
Chromium	<i>0.359 U</i>	3.91	<i>0.502 U</i>	<i>0.465 U</i>	1.46	35.6	<i>0.537 U</i>	<i>0.608 U</i>	<i>0.763 U</i>	100	100	55,000 (6)
Cobalt	1.89	6.15	12.9	3.39	1.24	22.9	2.63	0.0826 J	0.0637 J	n.a.	n.a.	n.a.
Copper	<i>0.52 U</i>	8.43	<i>0.52 U</i>	0.689 J	2.35	132	<i>0.52 U</i>	0.746 J	1.41 J	1,300	1,300	1,400
Iron	82	26,100	30,800	31,300	23,000	80,500	50,600	183	141 J	300	3,130	25,550
Lead	<i>0.075 U</i>	2.17	0.105 J	0.615 J	0.583 J	39.8	<i>0.075 U</i>	0.178 J	<i>0.075 UJ</i>	15	15	15
Magnesium	6,370 J	8,280 J	7,660 J	14,000 J	7,760 J	26,400 J	9,900 J	6,460 J	13,200 J	n.a.	n.a.	n.a.
Manganese	<u>120</u>	3,300	5,510	3,430	2,980	3,920	5,630	0.946 J	2.87 J	50	250	1,700
Mercury	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	<i>0.018 UJ</i>	2.0	2.0	11
Nickel	1.31	6.05	5.8	3.51	2.53	37.8	3.55	0.902 J	1.5	n.a.	209	730
Potassium	1,040	2,950	3,150	4,160	2,070	8,130	2,680	808	1,510	n.a.	n.a.	n.a.
Selenium	<i>0.11 UJ</i>	<i>0.289 UJ</i>	<i>0.123 UJ</i>	<i>0.11 UJ</i>	<i>0.268 UJ</i>	1.18	<i>0.272 UJ</i>	<i>0.115 UJ</i>	<i>0.11 UJ</i>	50	50	180
Silver	<i>0.085 U</i>	<i>0.085 U</i>	<i>0.085 U</i>	<i>0.085 U</i>	<i>0.085 U</i>	0.532 J	<i>0.085 U</i>	<i>0.085 U</i>	<i>0.085 U</i>	100	52.1	180
Sodium	2,000 J	3,330 J	2,150 J	4,360 J	2,670 J	5,350 J	2,710 J	1,950 J	2,860	n.a.	n.a.	n.a.
Thallium	<i>0.044 UJ</i>	<i>0.044 UJ</i>	<i>0.044 UJ</i>	<i>0.044 UJ</i>	<i>0.044 UJ</i>	0.356 J	<i>0.044 UJ</i>	<i>0.044 UJ</i>	<i>0.044 U</i>	2.0	2.0	2.6
Vanadium	0.135 J	5.41	0.871 J	0.668 J	1.71 J	53.2	1.24 J	0.268 J	<i>0.19 U</i>	n.a.	n.a.	n.a.
Zinc	3.43 J	7.68 J	4.48 J	8.01 J	7.94 J	68.3 J	5.03 J	5.04 J	<i>6.44 UJ</i>	5,000	3130	11,000

Notes: Italics indicates that the compound was not detected.

Bold type indicates that the compound exceeds the Idaho REM.

Underline type indicates that the compound exceeds the groundwater standard (MCL).

Highlighted type indicates that the compound exceeds the EPA Region 6 tap water guideline.

(1) Groundwater Standards include the National Primary and Secondary Drinking Water Regulations, which include the federal MCLs (EPA 2003), and the state Primary and Secondary Constituent Standards for Groundwater (IDAPA 2006).

Unless otherwise indicated, the standards are the same.

(2) Idaho Risk Evaluation Manual (DEQ 2004).

(3) EPA Region 6 Medium-Specific Human Health Screening Levels (EPA 2007a).

(4) For aluminum, the federal regulation specifies a range of 50 to 200 µg/L, and the state of Idaho has set the standard at 200 µg/L.

(5) For arsenic, the state standard is 50 µg/L, and the federal standard is 10 µg/L.

(6) Region 6 Tap Water value is for chromium (III)

Key:

ARARs = applicable or relevant and appropriate requirements

ID = identification

J = estimated value

µg/L = microgram per liter

n.a. = not available

TAL = target analyte list

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

Table 4-10

**Summary of Volatile Organic Compound Results in Surface Water Samples
Avery Landing Site
Avery, Idaho**

Sample Number:	7040132	7040133	7040134	7040130	ARARs	
					Idaho REM ⁽¹⁾	Federal AWQC ⁽²⁾
Sample Location:	SW-01	SW-02	SW-03	TB-01		
VOCs (µg/L)						
1,1,1-Trichloroethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	11
1,1,2,2-Tetrachloroethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	0.2	2,400
1,1,2-Trichloroethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	0.6	9,400
1,1-Dichloroethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
1,1-Dichloroethene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
1,2-Dichloroethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	0.4	20,000
cis-1,2-Dichloroethene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	11,600
trans-1,2-Dichloroethene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	11,600
1,2-Dichloropropane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
cis-1,3-Dichloropropene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
trans-1,3-Dichloropropene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
2-Butanone	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	n.a.	n.a.
2-Hexanone	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	n.a.	n.a.
4-Methyl-2-pentanone	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	n.a.	n.a.
Acetone	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	<i>5.0 U</i>	n.a.	n.a.
Benzene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	1.2	130
Bromodichloromethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Bromoform	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	4.3	n.a.
Bromomethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 UJ</i>	n.a.	n.a.
Carbon disulfide	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Carbon tetrachloride	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	0.3	9.8
Chlorobenzene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	680	50
Chloroethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Chloroform	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	5.7	1,240
Chloromethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Dibromochloromethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Dichlorodifluoromethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	11,000
Ethylbenzene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	3,100	7.3
Methylene chloride	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	4.7	2,200
Styrene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Tetrachloroethene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	840
Toluene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	6,800	9.8
Trichloroethene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	2.7	21,900
Trichlorofluoromethane	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	n.a.
Vinyl chloride	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	2.0	11,600
m,p-Xylene	<i>2.0 U</i>	<i>2.0 U</i>	<i>2.0 U</i>	<i>2.0 U</i>	n.a.	13 ⁽³⁾
o-Xylene	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	<i>1.0 U</i>	n.a.	13 ⁽³⁾

Note: Italics indicates the compound was not detected.
 Bold type indicates the compound exceeded the Idaho REM guideline.
 Underline type indicates the compound exceeded a federal guideline or standard.
 (1) Idaho Risk Evaluation Manual (DEQ 2004).
 (2) Ambient Water Quality Criteria (Buchman 1999).
 (3) Xylene standards are for total xylene.

Key:

ARAR = applicable or relevant and appropriate requirement
 AWQC = Ambient Water Quality Criteria
 ID = identification
 J = estimated value
 µg/L = microgram per liter
 U = not detected (at the indicated reporting limit)
 UJ = not detected (estimated reporting limit)

<p align="center">Table 4-11</p> <p align="center">Summary of Semivolatile Organic Compound Results in Surface Water Samples</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>					
Sample ID:	07040132	07040133	07040134	ARARs	
Sample Location:	SW-01	SW-02	SW-03	Idaho REM ⁽¹⁾	Federal AWQC ⁽²⁾
SVOCs (µg/L)					
1,2,4-Trichlorobenzene	0.19 U	0.19 U	0.19 U	960	50
1,2-Dichlorobenzene	0.19 U	0.19 U	0.19 U	2,700	n.a.
1,3-Dichlorobenzene	0.19 U	0.19 U	0.19 U	400	n.a.
1,4-Dichlorobenzene	0.19 U	0.19 U	0.19 U	400	763
1-Methylnaphthalene	0.029 U	0.041	0.34	n.a.	n.a.
2,4,5-Trichlorophenol	0.19 U	0.19 U	0.19 U	n.a.	n.a.
2,4,6-Trichlorophenol	0.29 U	0.29 U	0.29 U	n.a.	n.a.
2,4-Dichlorophenol	0.19 U	0.19 U	0.19 U	n.a.	365
2,4-Dimethylphenol	0.96 U	0.96 U	0.95 U	n.a.	n.a.
2,4-Dinitrophenol	2.4 U	2.4 U	2.4 U	n.a.	n.a.
2,4-Dinitrotoluene	0.19 U	0.19 U	0.19 U	n.a.	n.a.
2,6-Dinitrotoluene	0.19 U	0.19 U	0.19 U	n.a.	n.a.
2-Chloronaphthalene	0.029 U	0.029 U	0.029 U	n.a.	n.a.
2-Chlorophenol	0.19 U	0.19 U	0.19 U	n.a.	4,380
2-Methylnaphthalene	0.096 U	0.014 J	0.11	n.a.	n.a.
2-Methylphenol	0.19 U	0.19 U	0.19 U	n.a.	n.a.
2-Nitroaniline	0.19 U	0.19 U	0.19 U	n.a.	n.a.
2-Nitrophenol	0.19 U	0.19 U	0.19 U	n.a.	n.a.
3 & 4 Methylphenol	0.38 U	0.38 U	0.38 U	n.a.	n.a.
3,3'-Dichlorobenzidine	0.96 U	0.96 U	0.95 U	n.a.	n.a.
3-Nitroaniline	0.19 U	0.19 U	0.19 U	n.a.	n.a.
4,6-Dinitro-2-methylphenol	1.9 U	1.9 U	1.9 U	n.a.	n.a.
4-Bromophenyl phenyl ether	0.19 U	0.19 U	0.19 U	n.a.	n.a.
4-Chloro-3-methylphenol	0.19 U	0.19 U	0.19 U	n.a.	n.a.
4-Chloroaniline	0.19 U	0.19 U	0.19 U	n.a.	50
4-Chlorophenyl phenyl ether	0.19 U	0.19 U	0.19 U	n.a.	n.a.
4-Nitroaniline	0.29 U	0.29 U	0.29 U	n.a.	n.a.
4-Nitrophenol	0.96 U	0.96 U	0.95 U	n.a.	n.a.
Acenaphthene	0.048 U	0.025 J	0.084	n.a.	520
Acenaphthylene	0.038 U	0.038 U	0.038 U	n.a.	n.a.
Anthracene	0.019 U	0.0088 J	0.015 J	9,600	0.73
Benzo[a]anthracene	0.029 U	0.029 U	0.011 J	0.0028	n.a.
Benzo[a]pyrene	0.019 U	0.019 U	0.027	0.0028	0.014
Benzo[b]fluoranthene	0.038 U	0.038 U	0.023 J	0.0028	n.a.
Benzo[g,h,i]perylene	0.029 U	0.029 U	0.029 U	n.a.	n.a.
Benzo[k]fluoranthene	0.029 U	0.029 U	0.029 U	0.0028	n.a.
Benzoic acid	0.96 U	0.96 U	0.95 U	n.a.	42
Benzyl alcohol	0.19 U	0.19 U	0.013 J	n.a.	n.a.

Key is at end of table.

Table 4-11 (continued)					
Summary of Semivolatile Organic Compound Results in Surface Water Samples Avery Landing Site Avery, Idaho					
Sample ID:	07040132	07040133	07040134	ARARs	
Sample Location:	SW-01	SW-02	SW-03	Idaho REM ⁽¹⁾	Federal AWQC ⁽²⁾
SVOCs (µg/L)					
Bis(2-chloroethoxy)methane	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	n.a.
Bis(2-chloroethyl)ether	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	0.031	n.a.
Bis(2-chloroisopropyl) ether	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	n.a.
Bis(2-ethylhexyl) phthalate	<i>1.4 U</i>	<i>1.4 U</i>	<i>1.4 U</i>	1.8	360
Butyl benzyl phthalate	<i>0.29 U</i>	<i>0.29 U</i>	<i>0.29 U</i>	n.a.	3.0
Carbazole	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	n.a.
Chrysene	<i>0.019 U</i>	<i>0.019 U</i>	0.016 J	0.0028	0.027
Dibenz[a,h]anthracene	<i>0.029 U</i>	<i>0.029 U</i>	<i>0.029 U</i>	0.0028	n.a.
Dibenzofuran	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	0.0037
Diethyl phthalate	<i>0.19 U</i>	0.011 J	<i>0.19 U</i>	23,000	3.0
Dimethyl phthalate	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	313,000	3.0
Di-n-butyl phthalate	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	2,700	3.0
Di-n-octyl phthalate	<i>0.19 U</i>	<i>0.19 U</i>	0.073 J	n.a.	3.0
Fluoranthene	<i>0.024 U</i>	0.0095 J	0.013 J	300	3,980
Fluorene	<i>0.029 U</i>	0.047	0.2	1,300	3.9
Hexachlorobenzene	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	0.00075	3.68
Hexachlorobutadiene	<i>0.29 U</i>	<i>0.29 U</i>	<i>0.29 U</i>	0.44	9.3
Hexachlorocyclopentadiene	<i>0.96 U</i>	<i>0.96 U</i>	<i>0.95 U</i>	240	5.2
Hexachloroethane	<i>0.29 U</i>	<i>0.29 U</i>	<i>0.29 U</i>	1.9	540
Indeno[1,2,3-cd]pyrene	<i>0.029 U</i>	<i>0.029 U</i>	<i>0.029 U</i>	0.0028	n.a.
Isophorone	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	n.a.
Naphthalene	<i>0.19 U</i>	<i>0.19 U</i>	0.032 J	n.a.	620
Nitrobenzene	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	n.a.
N-Nitrosodi-n-propylamine	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	n.a.	n.a.
N-Nitrosodiphenylamine	<i>0.19 U</i>	<i>0.19 U</i>	<i>0.19 U</i>	5.0	n.a.
Pentachlorophenol	<i>0.33 U</i>	<i>0.34 U</i>	<i>0.33 U</i>	0.27	15
Phenanthrene	<i>0.038 U</i>	0.12	0.21	n.a.	6.3 (proposed)
Phenol	<i>0.29 U</i>	<i>0.29 U</i>	<i>0.29 U</i>	n.a.	2,560
Pyrene	<i>0.029 U</i>	0.025 J	0.046	960	n.a.

Notes: Italics indicates the compound was not detected.
 Bold indicates the compound exceeded the Idaho REM.
 Underlined text indicates the compound exceeded a federal standard.
 (1) Idaho Risk Evaluation Manual (DEQ 2004).
 (2) Ambient Water Quality Criteria (Buchman 1999).

Key:

ARAR = applicable or relevant and appropriate requirement
 AWQC = Ambient Water Quality Criteria
 ID = identification
 J = estimated value
 µg/L = microgram per liter
 REM = Risk Evaluation Manual
 SVOC = semivolatile organic compound
 U = not detected (at the indicated reporting limit)
 UJ = not detected (estimated reporting limit)

<p align="center">Table 4-12</p> <p align="center">Summary of PCBs and NWTPH-Dx Results in Surface Water Samples</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>					
Sample ID:	07040132	07040133	07040134	ARARs	
Sample Location:	SW-01	SW-02	SW-03	Idaho REM ⁽¹⁾	Federal AWQC ⁽²⁾
PCBs (µg/L)					
Aroclor-1016	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
Aroclor-1221	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
Aroclor-1232	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
Aroclor-1242	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
Aroclor-1248	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
Aroclor-1254	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
Aroclor-1260	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.056 U</i>	n.a.	n.a.
NWTPH-Dx (µg/L)					
Sample ID:	07040132	07040133	07040134	ARARs	
Sample Location:	SW-01	SW-02	SW-03	Idaho REM ⁽¹⁾	Federal AWQC ⁽²⁾
Diesel-Range Organics	<i>48 U</i>	320	2,300	n.a.	n.a.
Oil-Range Organics	<i>190 U</i>	<i>190 U</i>	1,200	n.a.	n.a.

Notes:

Italics indicates the compound was not detected.

Bold indicates the compound exceeded the Idaho REM.

Underlined text indicates the compound exceeded a federal standard.

(1) Idaho Risk Evaluation Manual (DEQ 2004).

(2) Ambient Water Quality Criteria (Buchman 1999).

Key:

ARAR = applicable or relevant and appropriate requirement

AWQC = Ambient Water Quality Criteria

ID = identification

J = estimated value

µg/L = microgram per liter

n.a. =not available

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon,
Diesel Range Extended

PCBs = polychlorinated biphenyls

U = not detected (at the indicated reporting limit)

UJ = not detected (estimated reporting limit)

<p align="center">Table 4-13</p> <p align="center">Summary of TAL Metal Results in Surface Waters Samples</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>					
Sample ID:	07040132	07040133	07040134	ARARs	
Sample Location:	SW-01	SW-02	SW-03	Idaho REM ⁽¹⁾	Federal AWQC ⁽²⁾
TAL Metals (µg/L)					
Aluminum	32 <i>U</i>	32 <i>U</i>	32 <i>U</i>	n.a.	n.a.
Antimony	0.203 <i>U</i>	0.0903 <i>U</i>	0.056 <i>U</i>	14	50 (proposed)
Arsenic	0.209 J	0.248 J	0.296 J	50	150
Barium	<u>4.76</u> J	<u>5.11</u> J	<u>4.71</u> J	n.a.	4.0
Beryllium	0.043 <i>U</i>	0.043 <i>U</i>	0.043 <i>U</i>	n.a.	5.3
Cadmium	0.094 <i>U</i>	0.094 <i>U</i>	0.094 <i>U</i>	1.0	0.25 H
Calcium	8,270	8,700	7,920	n.a.	n.a.
Chromium	0.364 <i>U</i>	0.326 <i>U</i>	0.263 <i>U</i>	178	74 H (3)
Cobalt	0.029 J	0.0327 J	0.028 <i>U</i>	n.a.	n.a.
Copper	0.52 <i>UJ</i>	0.52 <i>UJ</i>	0.52 <i>UJ</i>	11	9 H
Iron	53.2 J	53.6 J	48.7 J	n.a.	1000
Lead	0.075 <i>UJ</i>	0.075 <i>UJ</i>	0.075 <i>UJ</i>	2.5	2.5 H
Magnesium	1,830 J	1,930 J	1,770 J	n.a.	n.a.
Manganese	1.07 J	1.31 J	1.37 J	n.a.	120
Mercury	0.018 <i>UJ</i>	0.018 <i>UJ</i>	0.018 <i>UJ</i>	0.012	0.77
Nickel	0.364 <i>U</i>	0.32 <i>U</i>	0.282 <i>U</i>	157	52 H
Potassium	455	488	431	n.a.	n.a.
Selenium	0.11 <i>UJ</i>	0.11 <i>UJ</i>	0.11 <i>UJ</i>	5.0	5.0
Silver	0.085 <i>U</i>	0.085 <i>U</i>	0.085 <i>U</i>	3.4	1.6 H
Sodium	1,030	1,020	971	n.a.	n.a.
Thallium	0.044 <i>U</i>	0.044 <i>U</i>	0.044 <i>U</i>	1.7	40
Vanadium	0.173 <i>U</i>	0.231 <i>U</i>	0.342 <i>U</i>	n.a.	n.a.
Zinc	9.55 <i>UJ</i>	1.8 <i>UJ</i>	2.48 <i>UJ</i>	105	120 H

Notes:

- Italics indicates that the compound was not detected.
- Bold type indicates that the compound exceeds the Idaho REM.
- Underline type indicates that the compound exceeds the Federal AWQC.
- (1) Idaho Risk Evaluation Manual (DEQ 2004).
- (2) Ambient Water Quality Criteria (Buchman 1999).
- (3) Chromium value is for chromium (III).

Key:

- ARAR = applicable or relevant and appropriate requirement
- AWQC = Ambient Water Quality Criteria
- H = value is hardness dependent; a hardness of 100 mg/L is assumed.
- ID = identification
- J = estimated value
- mg/L = milligrams per liter
- µg/L = microgram per liter
- TAL = target analyte list
- U = not detected (at the indicated reporting limit)
- UJ = not detected (estimated reporting limit)

Table 4-14	
Summary of Volatile Organic Compound Results in Product Sample Avery Landing Site Avery, Idaho	
Sample Number:	7040131
Sample Location:	HC-4
VOCs (µg/L)	
1,1,1-Trichloroethane	2,000 <i>U</i>
1,1,2,2-Tetrachloroethane	2,000 <i>U</i>
1,1,2-Trichloroethane	2,000 <i>U</i>
1,1-Dichloroethane	2,000 <i>U</i>
1,1-Dichloroethene	2,000 <i>U</i>
1,2-Dichloroethane	2,000 <i>U</i>
cis-1,2-Dichloroethene	2,000 <i>U</i>
trans-1,2-Dichloroethene	2,000 <i>U</i>
1,2-Dichloropropane	2,000 <i>U</i>
cis-1,3-Dichloropropene	2,000 <i>U</i>
trans-1,3-Dichloropropene	2,000 <i>U</i>
2-Butanone	10,000 <i>U</i>
2-Hexanone	10,000 <i>U</i>
4-Methyl-2-pentanone	10,000 <i>U</i>
Acetone	10,000 <i>U</i>
Benzene	2,000 <i>U</i>
Bromodichloromethane	1,500 <i>J</i>
Bromoform	2,000 <i>U</i>
Bromomethane	2,000 <i>U</i>
Carbon disulfide	2,000 <i>U</i>
Carbon tetrachloride	2,000 <i>U</i>
Chlorobenzene	1,600 <i>J</i>
Chloroethane	2,000 <i>U</i>
Chloroform	2,000 <i>U</i>
Chloromethane	2,000 <i>U</i>
Dibromochloromethane	2,000 <i>U</i>
Dichlorodifluoromethane	2,000 <i>U</i>
Ethylbenzene	2,000 <i>U</i>
Methylene chloride	2,700
Styrene	2,000 <i>U</i>
Tetrachloroethene	2,000 <i>U</i>
Toluene	2,000 <i>U</i>
Trichloroethene	2,000 <i>U</i>
Trichlorofluoromethane	2,000 <i>U</i>
Vinyl chloride	2,000 <i>U</i>
m,p-Xylene	4,000 <i>U</i>
o-Xylene	2,000 <i>U</i>

Note: Italics indicates that the compound was not detected.

Key:

- ID = identification
- J = estimated value
- µg/L = microgram per liter
- U = not detected (at the indicated reporting limit)
- UJ = not detected (estimated reporting limit)

Table 4-15	
Summary of Semivolatile Organic Compound Results in Product Sample Avery Landing Site Avery, Idaho	
Sample ID:	07040131
Sample Location:	HC-4
SVOCs (µg/kg)	
1,2,4-Trichlorobenzene	43,000 U
1,2-Dichlorobenzene	43,000 U
1,3-Dichlorobenzene	43,000 U
1,4-Dichlorobenzene	43,000 U
1-Methylnaphthalene	1,700,000
2,4,5-Trichlorophenol	85,000 U
2,4,6-Trichlorophenol	130,000 U
2,4-Dichlorophenol	85,000 U
2,4-Dimethylphenol	85,000 U
2,4-Dinitrophenol	850,000 U
2,4-Dinitrotoluene	85,000 U
2,6-Dinitrotoluene	85,000 U
2-Chloronaphthalene	17,000 U
2-Chlorophenol	85,000 U
2-Methylnaphthalene	2,400,000
2-Methylphenol	85,000 U
2-Nitroaniline	85,000 U
2-Nitrophenol	85,000 U
3 & 4 Methylphenol	170,000 U
3,3'-Dichlorobenzidine	170,000 U
3-Nitroaniline	85,000 U
4,6-Dinitro-2-methylphenol	850,000 U
4-Bromophenyl phenyl ether	85,000 U
4-Chloro-3-methylphenol	85,000 U
4-Chloroaniline	85,000 U
4-Chlorophenyl phenyl ether	85,000 U
4-Nitroaniline	85,000 U
4-Nitrophenol	850,000 U
Acenaphthene	130,000
Acenaphthylene	17,000 U
Anthracene	63,000
Benzo[a]anthracene	17,000 J
Benzo[a]pyrene	24,000 J
Benzo[b]fluoranthene	21,000
Benzo[g,h,i]perylene	21,000 U
Benzo[k]fluoranthene	21,000 U
Benzoic acid	2,100,000 U

Key is on last page.

<p align="center">Table 4-15</p> <p align="center">Summary of Semivolatile Organic Compound Results in Product Sample</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>	
Sample ID:	07040131
Sample Location:	HC-4
SVOCs (µg/kg)	
Benzyl alcohol	85,000 <i>U</i>
Bis(2-chloroethoxy)methane	85,000 <i>U</i>
Bis(2-chloroethyl)ether	85,000 <i>U</i>
Bis(2-chloroisopropyl) ether	130,000 <i>U</i>
Bis(2-ethylhexyl) phthalate	1,300,000 <i>U</i>
Butyl benzyl phthalate	85,000 <i>U</i>
Carbazole	130,000 <i>UJ</i>
Chrysene	29,000
Dibenz[a,h]anthracene	34,000 <i>U</i>
Dibenzofuran	85,000 <i>U</i>
Diethyl phthalate	85,000 <i>U</i>
Dimethyl phthalate	85,000 <i>U</i>
Di-n-butyl phthalate	170,000 <i>U</i>
Di-n-octyl phthalate	170,000 <i>U</i>
Fluoranthene	37,000
Fluorene	360,000
Hexachlorobenzene	43,000 <i>U</i>
Hexachlorobutadiene	43,000 <i>U</i>
Hexachlorocyclopentadiene	85,000 <i>U</i>
Hexachloroethane	85,000 <i>U</i>
Indeno[1,2,3-cd]pyrene	34,000 <i>UJ</i>
Isophorone	85,000 <i>U</i>
Naphthalene	320,000
Nitrobenzene	85,000 <i>U</i>
N-Nitrosodi-n-propylamine	85,000 <i>U</i>
N-Nitrosodiphenylamine	43,000 <i>UJ</i>
Pentachlorophenol	85,000 <i>U</i>
Phenanthrene	700,000
Phenol	85,000 <i>U</i>
Pyrene	69,000

Note: Italics indicates that the compound was not detected.

Key:

- ID = identification
- J = estimated value
- µg/kg = microgram per kilogram
- SVOC = semivolatile organic compound
- U = not detected (at the indicated reporting limit)
- UJ = not detected (estimated reporting limit)

Table 4-16 Summary of PCB and NWTPH-Dx Results in Product Sample Avery Landing Site Avery, Idaho	
Sample ID:	07040131
Sample Location:	HC-4
PCBs (µg/kg)	
Aroclor-1016	<i>470 U</i>
Aroclor-1221	<i>470 U</i>
Aroclor-1232	<i>470 U</i>
Aroclor-1242	<i>470 U</i>
Aroclor-1248	<i>470 U</i>
Aroclor-1254	<i>470 U</i>
Aroclor-1260	330 J
NWTPH-Dx (mg/kg)	
Sample ID:	07040131
Sample Location:	HC-4
Diesel-Range Organics	1,100,000
Oil-Range Organics	260,000

Note: Italics indicates that the compound was not detected.

Key:

- ID = identification
- J = estimated value
- µg/kg = microgram per kilogram
- mg/kg = milligrams per kilogram
- NWTPH-Dx = Northwest Total Petroleum Hydrocarbon,
Diesel Range Extended
- PCBs = polychlorinated biphenyls
- U = not detected (at the indicated reporting limit)
- UJ = not detected (estimated reporting limit)

Table 4-17	
Summary of TAL Metals Results in Product Sample Avery Landing Site Avery, Idaho	
Sample ID:	07040131
Sample Location:	HC-4
TAL Metals (mg/kg)	
Aluminum	71.2
Antimony	0.28 J
Arsenic	3.1
Barium	2.3
Beryllium	<i>0.013 U</i>
Cadmium	0.061 J
Calcium	55.9 J
Chromium	3.4
Cobalt	0.38
Copper	10.9
Iron	35.9
Lead	1.6
Magnesium	<i>1.3 U</i>
Manganese	0.74 J
Mercury	<i>0.00546 U</i>
Nickel	21.8
Potassium	7.6 J
Selenium	0.23 J
Silver	0.038 J
Sodium	5.5 J
Thallium	<i>0.0091 U</i>
Vanadium	21.9
Zinc	<i>1.5 U</i>

Note: Italics indicates that the compound was not detected.

Key:

ID = identification

J = estimated value

mg/kg = milligrams per kilogram

TAL = target analyte list

U = not detected (at the indicated reporting limit)

Table 4-18						
Summary of Exceedences of Federal Action Levels in Soil						
Avery Landing Site						
Avery, Idaho						
Property	Sample ID	Benzo[a] anthracene	Benzo[a] pyrene	Benzo[b] fluoranthrene	Dibenz[a,h] anthracene	Arsenic ⁽¹⁾
		µg/kg	µg/kg	µg/kg	µg/kg	mg/kg
EPA Region 6 HHMSSL - Residential Soil		150	15	150	15	0.39
Benticik	EMW-01	n.d.	n.d.	n.d.	n.d.	17.3 J
	EMW-02	n.e.	85	n.e.	n.d.	8.6 J
	EMW-06	n.e.	n.d.	n.d.	n.d.	7.5 J
	ESB-04	860 / 190	650 / 110	490	n.d.	16.1 J / 5.4 J
	ESB-05	n.e.	37	n.e.	n.d.	17 J
	ESB-06	n.e.	62 J	n.e.	n.d.	6.1 J
Potlatch	EMW-03	n.d.	n.d.	n.d.	n.d.	7.3 J
	EMW-04	n.e.	58	n.e.	n.e.	12 J
	EMW-05	210	110	n.e.	n.d.	5.7 J
	ESB-01	n.d.	n.d.	n.d.	n.d.	15.7 J
	ESB-02	n.e.	43	n.e.	40 J	16.9 J
	ESB-03	n.e.	81 J	n.e.	n.d.	4.2 J
	ESB-07	n.e.	44	n.e.	n.d.	5.1 J

Note: (1) The upper limit of background soil concentrations for arsenic in the nearby Coeur d'Alene and Spokane River basins is 22 mg/kg (URS Greiner 2001).

Key:

HHMSSL = Human Health Medium-Specific Screening Level

n.d. = not detected

n.e. = no exceedence of EPA HHMSSL.

Table 4-19

**Summary of Exceedences of State Action Levels in Soil
Avery Landing Site
Avery, Idaho**

		2-Methyl naphthalene	4-Nitro aniline	Benzo[a] anthracene	Benzo[a] pyrene	Benzo[b] fluoranthrene	Naphthalene	Arsenic ⁽¹⁾	Iron	Lead	Manganese	Mercury
Property	Sample ID	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Idaho Risk Evaluation Manual		3,310	3	422	42	422	1,144	0.39	5.8	50	223	0.0051
Bentcik	EMW-01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	17.3 J	24,600	n.e.	403 J	0.0199 J
	EMW-02	n.e.	n.d.	n.e.	85	n.e.	n.e.	8.6 J	20,000	n.e.	260 J	0.0124 J
	EMW-06	44,000	n.d.	n.e.	n.d.	n.d.	4,700	7.5 J	16,900	n.e.	319 J	0.0105 J
	ESB-04	18,000	n.d.	860	650 / 110	490	3,100	16.1 J / 5.4 J	16,800 / 16,300	69.1	315 J / 240 J	0.0312 J
	ESB-05	n.e.	5.4 J	n.e.	37	n.e.	n.e.	17 J	18,400	n.e.	n.e.	n.d.
	ESB-06	9,800	n.d.	n.e.	62 J	n.e.	2,600 J	6.1 J	17,100	n.e.	n.e.	n.d.
Potlatch	EMW-03	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	7.3 J	15,100	n.e.	n.e.	0.0114 J
	EMW-04	n.e.	n.d.	n.e.	58	n.e.	n.e.	12 J	19,700	145	354 J	0.0553 J
	EMW-05	23,000	n.d.	n.e.	110	n.e.	3,600	5.7 J	18,000	n.e.	271 J	0.0119 J
	ESB-01	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	15.7 J	18,900	n.e.	n.e.	n.d.
	ESB-02	n.e.	n.d.	n.e.	43	n.e.	n.e.	16.9 J	19,300	159	288 J	0.117
	ESB-03	15,000	n.d.	n.e.	81 J	n.e.	6,000 J	4.2 J	15,000	n.e.	n.e.	n.d.
	ESB-07	n.e.	n.d.	n.e.	44	n.e.	n.e.	5.1 J	15,100	n.e.	n.e.	n.d.

Note: (1) The upper limit of background soil concentrations for arsenic in the nearby Coeur d'Alene and Spokane River basins is 22 mg/kg (URS Greiner 2001).

Key:

n.d. = not detected

n.e. = no exceedence of Idaho Risk Evaluation Manual

<p align="center">Table 4-20</p> <p align="center">Summary of Exceedences of Federal Action Levels in Water</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>												
Property	Sample ID	Benzo[a] anthracene ug/L	Benzo[a] pyrene ug/L	Benzo[b] fluoranthrene ug/L	Benzo[g,h,i] perylene ug/L	Chrysene ug/L	Naphthalene ug/L	Aluminum ug/L	Arsenic ug/L	Iron ug/L	Lead ug/L	Manganese ug/L
Groundwater												
Drinking Water Standard (MCL)		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	200 ⁽¹⁾	10 ⁽²⁾	300	15	50
EPA Region 6 HHMSSL - Tap Water		0.029	0.0029	0.15	0.029	2.9	6.2	36,500	0.045	25,550	15	1,700
Bentcik	EMW-01	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	0.303 J	n.e.	n.d.	120
	EMW-02	0.37	0.20	n.e.	0.11	n.e.	n.e.	2,050	88.6	26,100	n.e.	3,300
	EMW-06	1.6	0.85	0.84	0.51	3.0	63	32,200	58.6	80,500	39.8	3,920
	MW-5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	0.655 J	n.e.	n.e.	n.e.
Potlatch	EMW-03	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	30.7	30,800	n.e.	5,510
	EMW-04	n.e.	n.d.	n.e.	0.037	n.e.	n.d.	n.e.	13.7	31,300	n.e.	3,430
	EMW-05	n.d.	n.d.	n.d.	n.d.	n.d.	7.1	634	51.4	23,000	n.e.	2,980
	HC-1R	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	46.6	50,600	n.d.	5,630
	DW-01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.06	n.e.	n.d.	n.e.
Surface Water												
Federal AWQC		n.a.	0.014	n.a.	n.a.	n.a.	n.a.	n.a.	150	n.a.	2.5	120
Bentcik	SW-03	n.e.	0.027	n.e.	n.d.	n.e.	n.e.	n.d.	n.e.	n.e.	n.d.	n.e.

Notes: Bis(2-ethyl hexyl) phthalate is not included because it is a common laboratory contaminant and it was present in the background well.

Barium is not included for surface water because the concentrations exceeded the Federal AWQC in all three samples, including the upstream/background sample.

A bold sample result indicates that the sample exceeds both the MCL and the Region 6 tap water guideline.

(1) For aluminum, the federal regulation specifies a range of 50 to 200 µg/L, and the state of Idaho has set the standard at 200 µg/L.

(2) For arsenic, the state standard is 50 µg/L, and the federal standard is 10 µg/L.

Key:

AWQC = Ambient Water Quality Criteria

HHMSSL = Human Health Medium-Specific Screening Level

MCL = Maximum Contaminant Level

n.a. = not applicable

n.d. = not detected

n.e. = no exceedence of applicable standard or guideline

<p align="center">Table 4-21</p> <p align="center">Summary of Exceedences of State Action Levels in Water</p> <p align="center">Avery Landing Site</p> <p align="center">Avery, Idaho</p>													
Property	Sample ID	2-Methyl naphthalene ug/L	Benzo[a] anthracene ug/L	Benzo[a] pyrene ug/L	Benzo[a] fluoranthrene ug/L	Chrysene ug/L	N-Nitro sodiphenyl amine ug/L	Aluminum ug/L	Arsenic ug/L	Iron ug/L	Lead ug/L	Manganese ug/L	PCBs (Aroclor 1260) ug/L
Groundwater													
Groundwater Standard (MCL)		n.a.	n.a.	0.20	n.a.	n.a.	n.a.	200 ⁽¹⁾	50 ⁽²⁾	300	15	50	0.5
Idaho Risk Evaluation Manual		42	0.077	0.20	0.077	7.7	11	n.a.	10	3,130	15	250	0.0279
Bentcik	EMW-01	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.e.	n.d.	n.e.	n.d.
	EMW-02	n.e.	0.37	0.20	0.12	n.e.	n.d.	2,050	88.6	26,100	n.e.	3,300	n.d.
	EMW-06	270	1.6	0.85	0.84	n.e.	12	32,200	58.6	80,500	39.8	3,920	0.028
	MW-5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.e.	n.e.	n.e.	n.e.	n.d.
Potlatch	EMW-03	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	30.7	30,800	n.e.	5,510	n.d.
	EMW-04	n.d.	n.e.	n.d.	n.e.	n.e.	n.d.	n.e.	13.7	31,300	n.e.	3,430	n.d.
	EMW-05	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	634	51.4	23,000	n.e.	2,980	n.d.
	HC-1R	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	46.6	50,600	n.d.	5,630	n.d.
	DW-01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.e.	n.d.	n.e.	n.d.
Surface Water													
Idaho Risk Evaluation Manual		n.a.	0.0028	0.0028	0.0028	0.0028	n.a.	n.a.	50	n.a.	2.5	n.a.	n.a.
Bentcik	SW-03	n.d.	0.011 J	0.027	0.023 J	0.016 J	n.d.	n.d.	n.e.	n.e.	n.d.	n.e.	n.d.

Note: Bis(2-ethyl hexyl) phthalate is not included because it is a common laboratory contaminant and it was present in the background well.
A bold sample result indicates that the sample exceeds both the groundwater standard and the Idaho Risk Evaluation Manual guideline.
(1) For aluminum, the federal regulation specifies a range of 50 to 200 µg/L, and the state of Idaho has set the standard at 200 µg/L.
(2) For arsenic, the state standard is 50 µg/L, and the federal standard is 10 µg/L.

Key:

n.a. = not applicable
n.d. = not detected
n.e. = no exceedence of Idaho Risk Evaluation Manual

Table 4-22									
Comparison of Soil Sample Results to Consensus-Based Sediment Threshold Effect Concentrations Avery Landing Site Avery, Idaho									
Sample ID:	07040102	07040104	07040106	07040108	07040110	07040114	07040116	07040117	Consensus-Based Sediment TEC ⁽¹⁾
Sample Location:	EMW-01 SB 02	EMW-02 SB 07	EMW-03 SB 11	EMW-04 SB 03	EMW-05 SB 09	EMW-06 SB 09	ESB-01 SB 07	ESB-02 SB 03	
PAHs (µg/kg)									
Anthracene	14 J	91	2.7 U	7.1 J	700	250	22 U	6.5 J	57.2
Benzo[a]anthracene	27 UJ	120	3.4 U	38 J	210	53	28 U	29	108
Benzo[a]pyrene	33 UJ	85	4.1 U	58	110	39 U	33 U	43	150
Chrysene	27 UJ	180	3.4 U	48	360	120	28 U	37	166
Dibenz[a,h]anthracene	44 UJ	47 U	5.5 U	36 J	50 U	53 U	45 U	40 J	33.0
Fluoranthene	26	65	2.7 U	61 J	460	99	22 U	33	423
Fluorene	22 U	180	9.7	22 U	2,800	4,900	22 U	22 U	77.4
Naphthalene	22 U	81	2.7 U	19 J	3,600	4,700	22 U	100	176
Phenanthrene	22 U	420	2.7 U	43	5,800	3,800	22 U	89	204
Pyrene	44	370	2.7 U	65	840	240	22 U	43	195
PCBs (µg/kg)									
Aroclor-1260	9.8 J	12 U	130	19	20 J	9.2 J	11 U	4.4 J	59.8 ⁽²⁾
TAL Metals (mg/kg)									
Sample ID:	07040102	07040105	07040106	07040108	07040110	07040113	07040116	07040117	Consensus-Based Sediment TEC ⁽¹⁾
Sample Location:	EMW-01 SB 02	EMW-02 SB 05	EMW-03 SB 11	EMW-04 SB 03	EMW-05 SB 09	EMW-06 SB 07	ESB-01 SB 07	ESB-02 SB 03	
Arsenic	17.3 J	8.6 J	7.3 J	12 J	5.7 J	7.5 J	15.7 J	16.9 J	9.79
Cadmium	0.47 J	0.52 J	0.45 J	0.81 J	0.39 J	0.43 J	0.53 J	0.78 J	0.99
Chromium	18.8	18.4	11.9	15.1	13.2	12.8	12.1	12.3	43.4
Copper	23.7	21.5	20.8	101	25.1	20.7	20.5	71.6	31.6
Lead	11	9.5	9.3	145	6.1	8.3	17.3	159	35.8
Mercury	0.0199 J	0.0124 J	0.0114 J	0.0553 J	0.0119 J	0.0105 J	0.0064 UJ	0.117	0.18
Nickel	16.5	16.3	13.3	24.9	13.1	13.4	16.1	32.3	22.7
Zinc	48.7	47.3	42.2	101	34.9	42.5	26	72.3	121

Key is on last page.

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**Analytical Data Summary Tables, 2009
Potlatch Field Investigation, and START
Data Validation Memoranda**

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TABLE 3-1
Test Pit Soil Results

Type	Analytes	Method	Screening Level mg/Kg	Collection Date	Sample ID	GTP1-2.5- 082709	GTP1-10.5- 082709	GTP1-13.5- 082709	GTP2-2.5- 082709	GTP2-8- 082709	GTP2-13- 082709	GTP3-3.5- 082709	GTP3-5- 082709	GTP3-13.5-082709 8/27/2009	GTP4-2.5- 082709	GTP4-6.0- 082709	GTP4-8.0- 082709	GTP5-3.0- 082709	GTP5-7.0- 082709	GTP5-11- 082809	GTP6-2.5- 082809	GTP6-10- 082809	GTP6-17- 082809
					Units	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009		8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry		452	8670	1630	24.7	< 11.5	< 12.7	44.2	770	23.7	25.6	11.3	< 16.1	< 16.8	774	342 J	< 11.4	9660	431
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry		3850	12800	2900	252	< 28.8	< 31.7	209	999	61.4	145	41.9	< 40.1	< 41.9	1090	985 J	< 28.4	3150	1200
PCBs	Aroclor 1016	8082	3.9	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	0.0098 UJ	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
	Aroclor 1221	8082	0.17	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
	Aroclor 1232	8082	0.17	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
	Aroclor 1242	8082	0.22	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
	Aroclor 1248	8082	0.22	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
	Aroclor 1254	8082	0.22	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
	Aroclor 1260	8082	0.22	mg/kg dry		< 0.0096	< 0.0098	< 0.0096	0.0223	< 0.0097	< 0.0096	< 0.0099	< 0.0096	0.0098 UJ	0.0185	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099
Carcinogenic PAH	Benzo(a)anthracene	8270 SIM	0.15	mg/kg dry		0.0459	0.348	0.0737 J	0.0168	0.00820	< 0.00465	< 0.00467	0.0295	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.00767	0.0130
	Benzo(a)pyrene	8270 SIM	0.02	mg/kg dry		0.0561	0.301	0.0259 J	0.0162	0.00769	< 0.00465	< 0.00467	0.0350	< 0.00474	0.00516	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.00488	0.0110
	Benzo(b)fluoranthene	8270 SIM	0.15	mg/kg dry		0.0968	< 0.0831	0.0518 J	0.0335	0.0123	< 0.00465	0.00958	0.0627	< 0.00474	0.0117	0.00953	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	0.0178
	Benzo(k)fluoranthene	8270 SIM	1.5	mg/kg dry		< 0.0268	< 0.0831	< 0.00495 R	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	< 0.00514
	Chrysene	8270 SIM	15	mg/kg dry		0.0382	0.989	0.168 J	0.0178	0.00871	< 0.00465	0.00670	0.0725	< 0.00474	0.00609	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.0153	0.0178
Non- Carcinogenic PAH	Dibenzo(a,h)anthracene	8270 SIM	0.02	mg/kg dry		< 0.0268	0.245	0.0290 J	0.00785	< 0.00461	< 0.00465	< 0.00467	0.0154	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	0.00549
	Indeno(1,2,3-cd)pyrene	8270 SIM	0.15	mg/kg dry		0.0510	0.277	0.0269 J	0.0126	0.00461	< 0.00465	0.00862	0.0264	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	0.00617
	Acenaphthene	8270 SIM	52.3	mg/kg dry		< 0.0268	0.498	0.00508 J	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.172 J	< 0.00514
	Acenaphthylene	8270 SIM	78	mg/kg dry		< 0.0268	< 0.0831	< 0.00495 R	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	< 0.00514
	Anthracene	8270 SIM	1040	mg/kg dry		< 0.0268	1.55	0.198 J	< 0.00471	< 0.00461	< 0.00465	< 0.00467	0.805	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.754	0.00823
	Benzo(g,h,i)perylene	8270 SIM	1178	mg/kg dry		0.0637	0.459	0.0345 J	0.0204	0.00666	< 0.00465	0.0105	0.0541	< 0.00474	0.00985	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.0209	0.0103
	Fluoranthene	8270 SIM	364	mg/kg dry		< 0.0268	0.150	0.0452 J	0.0257	0.00820	< 0.00465	0.00527	0.141	< 0.00474	0.00656	0.00524	< 0.00500	< 0.00447	0.0579	< 0.0254	< 0.00455	0.0914	0.0151
	Fluorene	8270 SIM	54.8	mg/kg dry		< 0.0268	1.41	0.0853 J	< 0.00471	< 0.00461	< 0.00465	< 0.00467	0.00984	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.207 J	0.00549
	Naphthalene	8270 SIM	1.14	mg/kg dry		< 0.0268	0.427	0.0818	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	0.0147	< 0.0254	< 0.00455	2.39 J	0.0185
	Phenanthrene	8270 SIM	79	mg/kg dry		< 0.0268	0.894	0.0635 J	0.00628	< 0.00461	< 0.00465	0.00527	0.0799	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	0.0340	< 0.0254	< 0.00455	< 0.00471	0.0130
	Pyrene	8270 SIM	359	mg/kg dry		0.133	2.25	0.396 J	0.0398	0.0138	< 0.00465	0.0101	0.168	< 0.00474	0.0136	0.00905	< 0.00500	< 0.00447	0.295	< 0.0254	< 0.00455	0.112	0.0343
	1-Methylnaphthalene	8270 SIM	22	mg/kg dry		< 0.0268	< 0.0831	0.0579	< 0.00471	< 0.00461	< 0.00465	< 0.00467	0.0105	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	0.00826	< 0.0254	< 0.00455	20.9 J	0.0412
	2-Methylnaphthalene	8270 SIM	310	mg/kg dry		< 0.0268	< 0.0831	< 0.00495	< 0.00471	< 0.00461	< 0.00465	< 0.00467	0.0105	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	39.1 J	0.0658
Total Metals	Aluminum	6010 / 6020	77000	mg/kg dry		8200	10000 J	6800	14000	15000	9400	13000	9200	16000	9100	14000	6000	10000	6300	5100	11000	6100	7100 J
	Arsenic	6010 / 6020	0.4	mg/kg dry		8	5.7	11	18	32	21	8.5	8.9	45	20	28	9.4	15	3.6	3.7	17	4.7	8.3
	Antimony	6010 / 6020	4.8	mg/kg dry		13	0.45	1.3	2.1	1.1	0.44	0.85	1.1	0.87	1.3	1.6	0.62	1.5	0.42 U	1.9	0.89	0.64	1.8
	Barium	6010 / 6020	896	mg/kg dry		1100	76	64	240	100	61	88	180	110	87	130	39	63	150	27	78	89	54
	Beryllium	6010 / 6020	1.63	mg/kg dry		1.1	0.37	0.29	10	0.61	0.37	0.82	0.51	0.75	0.45	0.81	0.22 U	0.55	0.32 U	0.25	0.52	0.32 U	0.3
	Calcium	6010 / 6020	NSA	mg/kg dry		8800	1600	1500	6400	2100	1500	5200	5300	1800	2500	3600	900	2700	5900	3200	5400	2800	2100
	Cadmium	6010 / 6020	1.35	mg/kg dry		0.42	0.26 U	0.21 U	0.94	0.3	0.18 J	0.27	0.28	0.32	0.34	0.61	0.22 U	0.31	0.32 U	0.19 J	0.34	0.32 U	0.29
	Chromium	6010 / 6020	2135	mg/kg dry		8.6	11	7.6	13	16	11	12	10	18	11	14	7.2	8.3	5.3	6.2	9.4	6.4	8.8
	Cobalt	6010 / 6020	23	mg/kg dry		7.6	6.8 J	8.9	7.5	8.2	6.5	8.7	5.9	12	9.2	11	5.1	12	4	4.4	11	4.3	6.2
	Copper	6010 / 6020	921	mg/kg dry		160	18	31	50	19	19	23	31	29	49	63	27	22	16	70	26	17	50 J
	Iron	6010 / 6020	5.8	mg/kg dry		13000	15000 J	13000	16000	16000	13000	15000	12000	20000	14000	19000	12000	18000	7800	9000	18000	9500	12000 J
	Lead	6010 / 6020	49.6	mg/kg dry		410	8.4	16	140	22	7.2	72	44	11	53	55	21	9.3	7.4	41	11	34	34
	Magnesium	6010 / 6020	NSA	mg/kg dry		2700	5700	3900	4300	8800	4600	9600	5300	6100	3300	3300	3200	4400	2800	2900	3500	2700	3500 J
	Manganese	6010 / 6020	223	mg/kg dry		240	130	140	370	490	370	520	400	560	320	500	260	540	330	49	500	200	200
	Mercury	7470A / 7471B	0.0051	mg/kg dry		0.0083 J	0.015 J	0.013 J	0.027	0.024	< 0.024	0.018 J	0.11	< 0.026	0.016 J	0.022	0.012 J	0.025	<0.040	0.014 J	0.018 J	0.023 J	0.01

TABLE 3-1
Test Pit Soil Results

Type	Analytes	Method	Screening Level mg/Kg	Sample ID Collection Date	GTP1-2.5-	GTP1-10.5-	GTP1-13.5-	GTP2-2.5-	GTP2-8-	GTP2-13-	GTP3-3.5-	GTP3-5-	GTP3-13.5-082709 8/27/2009	GTP4-2.5-	GTP4-6.0-	GTP4-8.0-	GTP5-3.0-	GTP5-7.0-	GTP5-11-	GTP6-2.5-	GTP6-10-	GTP6-17-	
					082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009		082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082709 8/27/2009	082809 8/28/2009	082809 8/28/2009
Semivolatiles	Units																						
	1-Methylnaphthalene	8270C	22	mg/kg dry	0.023 J	< 0.41	< 0.32	< 0.36	< 0.0035	< 0.0078	0.001 J	0.012	< 0.0078	0.0086	< 0.033	< 0.0034	< 0.0032	0.016	< 0.066	0.0016 J	45	0.33	
	2-Methylnaphthalene	8270C	310	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	< 0.0023	< 0.0052	0.0023 J	0.013	< 0.0052	0.015	< 0.022	0.00031 J	< 0.0022	0.01	< 0.044	0.002 J	78	0.48	
	2-Methylphenol	8270C	1.8	mg/kg dry	< 1.1	< 1.4	< 1.1	< 1.2	< 0.012	< 0.026	< 0.022	0.005 J	< 0.026	< 0.021	< 0.11	< 0.011	< 0.020	< 0.22	< 0.011	< 0.16	< 0.028		
	3 & 4 Methylphenol	8270C	NSA	mg/kg dry	< 2.3	< 2.7	< 2.1	< 2.4	< 0.023	< 0.052	< 0.044	0.066	< 0.052	< 0.042	< 0.22	< 0.023	< 0.022	< 0.041	< 0.44	< 0.022	< 0.33	< 0.056	
	Acenaphthene	8270C	52	mg/kg dry	< 0.23	1.6	< 0.21	< 0.24	< 0.0023	< 0.0052	0.00082 J	< 0.0055	< 0.0052	< 0.0042	< 0.022	< 0.0023	< 0.0022	< 0.0041	< 0.044	< 0.0022	1.2	0.029	
	Acenaphthylene	8270C	78	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.00072 J	< 0.0052	< 0.0044	< 0.0055	< 0.0052	0.0025 J	< 0.022	< 0.0023	< 0.0022	< 0.0041	< 0.044	< 0.0022	< 0.033	< 0.0056	
	Anthracene	8270C	1040	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.00084 J	< 0.0052	0.0016 J	< 0.0055	< 0.0052	0.0031 J	0.0052 J	< 0.0023	< 0.0022	< 0.0041	< 0.044	< 0.0022	< 0.033	0.0088	
	Benzo[a]anthracene	8270C	0.15	mg/kg dry	0.1 J	0.36	0.062	< 0.3	0.0057	0.001 J	0.0073	0.049	< 0.0065	0.0055	0.01 J	0.00068 J	< 0.0027	< 0.0051	< 0.055	< 0.0028	0.026 J	0.051	
	Benzo[a]pyrene	8270C	0.015	mg/kg dry	< 0.34	0.59	0.057	0.072 J	0.0047	0.00086 J	0.0065 J	0.037	< 0.0078	0.0071	0.01 J	0.0013 J	0.0008 J	< 0.0061	< 0.066	0.0016 J	< 0.049	0.041	
	Benzo[b]fluoranthene	8270C	0.15	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.0057	< 0.0052	0.0099	0.054	< 0.0052	0.0099	0.0076 J	0.00082 J	0.00091 J	< 0.0041	< 0.044	0.00098 J	< 0.033	0.049	
	Benzo[g,h,i]perylene	8270C	1178	mg/kg dry	0.18 J	< 0.34	< 0.27	< 0.3	0.002 J	< 0.0065	0.0066	0.021	< 0.0065	0.016	0.006 J	< 0.0028	0.00086 J	< 0.0051	< 0.055	0.0011 J	< 0.041	0.024	
	Benzo[k]fluoranthene	8270C	1.5	mg/kg dry	< 0.28	< 0.34	< 0.27	< 0.3	0.0018 J	< 0.0065	0.0028 J	0.011	< 0.0065	0.0023 J	0.0058 J	0.00019 J	0.00016 J	< 0.0051	< 0.055	0.00038 J	< 0.041	0.012	
	bis(2-ethylhexyl) phthalate	8270C	11.8	mg/kg dry	< 17	< 20	< 16	< 18	< 0.17	< 0.39	0.12 J	0.3 J	< 0.39	0.15 J	< 2.7	< 0.28	< 0.27	< 0.51	< 5.5	< 0.28	< 4.1	< 0.70	
	Butyl benzyl phthalate	8270C	260	mg/kg dry	< 1.1	< 1.4	< 1.1	< 1.2	< 0.012	< 0.026	0.014 J	< 0.027	< 0.026	< 0.31	< 1.6	< 0.17	< 0.16	< 0.31	< 3.3	< 0.17	< 2.5	< 0.42	
	Benzoic Acid	8270C	77	mg/kg dry	< 28	< 34	< 27	< 30	< 0.29	< 0.32	< 0.55	< 0.68	< 0.65	< 0.021	< 0.11	< 0.011	< 0.011	< 0.020	< 0.22	< 0.011	< 0.16	< 0.028	
	Carbazole	8270C	NSA	mg/kg dry	< 1.7	2.0 UJ	< 1.6	< 1.8	< 0.017	< 0.039	0.0015 J	< 0.041	< 0.039	0.0018 J	< 0.16	0.017 UJ	0.016 UJ	0.031 UJ	< 0.33	0.017 UJ	< 0.25	0.042 UJ	
	Chrysene	8270C	15	mg/kg dry	0.11 J	1.9	0.34	< 0.3	0.0068	0.0017 J	0.01	0.1	0.012	0.0081	0.014 J	0.00045 J	< 0.0027	< 0.0051	< 0.055	< 0.0028	0.047	0.069	
	Dibenzo(a,h)anthracene	8270C	0.015	mg/kg dry	< 0.45	< 0.54	< 0.43	< 0.49	< 0.0046	< 0.01	0.0014 J	0.0081 J	< 0.010	< 0.0084	< 0.044	< 0.0045	< 0.0043	< 0.0082	< 0.088	< 0.0045	< 0.065	0.0079 J	
	Dibenzofuran	8270C	6.1	mg/kg dry	< 1.1	0.56 J	< 1.1	< 1.2	< 0.012	< 0.026	0.00085 J	< 0.027	< 0.026	< 0.021	< 0.11	< 0.011	< 0.011	< 0.020	< 0.22	< 0.011	< 0.16	< 0.028	
	Diethyl phthalate	8270C	27.5	mg/kg dry	0.2 J	< 1.4	< 1.1	< 1.2	0.0019 J	0.002 J	0.0036 U	< 0.027	0.0069 U	0.0036 U	0.019 J	0.011 U	0.011 U	< 0.020	< 0.22	0.011 U	< 0.16	< 0.028	
	Di-n-butyl phthalate	8270C	31	mg/kg dry	< 2.3	< 2.7	< 2.1	< 2.4	0.0071 U	0.0067 U	0.008	< 0.055	0.0091 U	0.01 U	< 0.22	0.023 U	0.022 U	0.2 J	< 0.44	0.022 U	0.33 U	< 0.056	
	Di-n-octyl phthalate	8270C	1829	mg/kg dry	< 2.3	2.7 U	< 2.1	< 2.4	< 0.023	< 0.052	< 0.044	< 0.055	< 0.052	< 0.042	< 0.22	< 0.023	< 0.022	< 0.041	< 0.44	< 0.022	< 0.33	< 0.056	
	Fluoranthene	8270C	364	mg/kg dry	< 0.23	1.0	0.13	0.089 J	0.0078	0.001 J	0.015	0.077	0.0021 J	0.0082	0.017 J	< 0.0023	< 0.0022	< 0.0041	< 0.044	< 0.0022	0.15	0.04	
	Fluorene	8270C	54.8	mg/kg dry	< 0.23	4.5	0.38	< 0.24	< 0.0023	< 0.0052	0.0014 J	0.012	< 0.0052	< 0.0042	< 0.022	< 0.0023	< 0.0022	0.0082	< 0.044	< 0.0022	2.1	0.032	
	Indeno[1,2,3-cd]pyrene	8270C	0.15	mg/kg dry	0.06 J	< 0.54	< 0.43	< 0.49	0.0024 J	< 0.01	0.0041 J	0.018	< 0.010	0.0073 J	0.0047 J	0.0006 J	0.00065 J	< 0.0082	< 0.088	0.0007 J	< 0.065	0.013	
	Naphthalene	8270C	1.14	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	< 0.0023	< 0.0052	0.0012 J	0.0065	< 0.0052	0.0076	< 0.022	0.00027 J	< 0.0022	0.031	< 0.044	0.0011 J	27	0.096	
	Phenanthrene	8270C	79	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.0029	< 0.0052	0.0092	0.083	< 0.0052	0.0064	0.0077 J	< 0.0023	< 0.0022	0.062	< 0.044	< 0.0022	2.4	0.051	
	Phenol	8270C	7.4	mg/kg dry	< 1.1	< 1.4	< 1.1	< 1.2	< 0.012	< 0.013	< 0.022	< 0.027	< 0.026	< 0.021	< 0.11	< 0.011	< 0.011	< 0.020	< 0.22	< 0.011	< 0.16	0.0095 J	
	Pyrene	8270C	359	mg/kg dry	0.089 J	1.5	0.19	0.081 J	0.0087	0.0012 J	0.013	0.094	0.0046 J	0.0099	0.015 J	< 0.0023	< 0.0022	< 0.0041	0.012 J	< 0.0022	0.12	0.083	
	Volatiles	1,2,4-Trimethylbenzene	8260B	67	mg/kg dry	0.14 J	< 0.15	< 0.080	< 0.22	< 0.072	< 0.055	0.017 J	0.021 J	< 0.070	0.41	0.054 J	< 0.048	< 0.060	0.12 J	< 0.053	< 0.056	53	0.42
		1,2-Dichlorobenzene	8260B	5.25	mg/kg dry	< 0.15	< 0.15	< 0.080	< 0.22	< 0.072	< 0.055	< 0.10	< 0.088	< 0.070	< 0.044	< 0.061	< 0.048	< 0.060	< 0.16	< 0.053	< 0.056	< 0.14	< 0.089
		1,3,5-Trimethylbenzene	8260B	47	mg/kg dry	0.048 J	< 0.15	< 0.080	< 0.22	< 0.072	< 0.055	< 0.10	< 0.088	< 0.070	0.27	0.022 J	< 0.048	< 0.060	0.058 J	< 0.053	< 0.056	13	0.12
		1,4-Dichlorobenzene	8260B	0.076	mg/kg dry	< 0.15	< 0.15	< 0.080	< 0.22	< 0.072	< 0.055	< 0.10	< 0.088</										

TABLE 3-1
Test Pit Soil Results

				Sample ID	GTP7-2.5-082809	GTP7-10.0-082809	GTP7-18-082809	TS-COMP-1	TS-COMP-2	TS-COMP-3					Sample ID	GTP7-2.5-082809	GTP7-10.0-082809	GTP7-18-082809	TS-COMP-1	TS-COMP-2	TS-COMP-3
Type	Analytes	Method	Screening Level mg/Kg	Collection Date	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	Type	Analytes	Method	Screening Level mg/Kg	Collection Date	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009
				Units											Units						
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry	< 15.8	23.4	< 16.9	763	2120	1790		1-Methylnaphthalene	8270C	22	mg/kg dry	< 0.0032	0.00056 J	0.00031 J	5.5	10	0.78
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry	42.2	182	< 42.3	263	1090	2050		2-Methylnaphthalene	8270C	310	mg/kg dry	< 0.0021	0.00067 J	0.00046 J	4.6	9.5	0.38
	Aroclor 1016	8082	3.9	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		2-Methylphenol	8270C	1.8	mg/kg dry	< 0.011	< 0.011	< 0.011	< 0.24	< 0.22	< 1.1
	Aroclor 1221	8082	0.17	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		3 & 4 Methylphenol	8270C	NSA	mg/kg dry	< 0.021	< 0.022	< 0.022	< 0.47	< 0.44	< 2.2
PCBs	Aroclor 1232	8082	0.17	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		Acenaphthene	8270C	52	mg/kg dry	< 0.0021	< 0.0022	< 0.0022	0.81	1.5	0.2 J
	Aroclor 1242	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		Acenaphthylene	8270C	78	mg/kg dry	0.00076 J	0.00083 J	< 0.0022	< 0.047	< 0.044	< 0.22
	Aroclor 1248	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		Anthracene	8270C	1040	mg/kg dry	< 0.0021	0.0016 J	< 0.0022	0.11	0.28	0.068 J
	Aroclor 1254	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		Benzo[a]anthracene	8270C	0.15	mg/kg dry	< 0.0027	0.0021 J	< 0.0028	0.049 J	0.1	< 0.27
Carcinogenic PAH	Aroclor 1260	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	0.0128	< 0.0097	0.0265		Benzo[a]pyrene	8270C	0.015	mg/kg dry	0.0016 J	0.0035	< 0.0033	0.021 J	0.077	< 0.33
	Benzo(a)anthracene	8270 SIM	0.15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0202	0.144	0.0258		Benzo[b]fluoranthene	8270C	0.15	mg/kg dry	0.0021 J	0.005	< 0.0022	< 0.047	< 0.044	< 0.22
	Benzo(a)pyrene	8270 SIM	0.02	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.00777	< 0.0538	< 0.0155		Benzo[g,h,i]perylene	8270C	1178	mg/kg dry	0.0017 J	0.0033	< 0.0028	< 0.059	0.036 J	< 0.27
	Benzo(b)fluoranthene	8270 SIM	0.15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0155	0.108	0.0330		Benzo[k]fluoranthene	8270C	1.5	mg/kg dry	0.00052 J	0.0018 J	< 0.0028	< 0.059	< 0.055	< 0.27
Non-Carcinogenic PAH	Benzo(k)fluoranthene	8270 SIM	1.5	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	< 0.00466	< 0.0538	< 0.0155		bis(2-ethylhexyl)phthalate	8270C	11.8	mg/kg dry	< 0.27	< 0.27	< 0.28	< 5.9	< 5.5	< 27
	Chrysene	8270 SIM	15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0394	0.236	0.0733		Butyl benzyl phthalate	8270C	260	mg/kg dry	< 0.16	< 0.16	0.17 UJ	< 3.5	< 3.3	< 16
	Dibenzo(a,h)anthracene	8270 SIM	0.02	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.00829	< 0.0538	0.0165		Benzoic Acid	8270C	77	mg/kg dry	< 0.011	< 0.011	< 0.011	< 0.24	< 0.22	< 1.1
	Indeno(1,2,3-cd)pyrene	8270 SIM	0.15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.00725	< 0.0538	0.0155		Carbazole	8270C	NSA	mg/kg dry	0.00059 J	0.001 UJ	< 0.017	< 0.35	< 0.33	< 1.6
	Acenaphthene	8270 SIM	52.3	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.270	0.959	0.111 J		Chrysene	8270C	15	mg/kg dry	< 0.0027	0.0038	< 0.0028	0.088	0.26	< 0.27
	Acenaphthylene	8270 SIM	78	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	< 0.00466	< 0.0538	0.0186 J		Dibenzo(a,h)anthracene	8270C	0.015	mg/kg dry	< 0.0043	0.00079 J	< 0.0044	< 0.095	< 0.087	< 0.44
	Anthracene	8270 SIM	1040	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.206	1.24	0.167 J		Dibenzofuran	8270C	6.1	mg/kg dry	< 0.011	< 0.011	< 0.011	< 0.24	< 0.22	< 1.1
	Benzo(g,h,i)perylene	8270 SIM	1178	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0104	< 0.0538	0.0217		Diethyl phthalate	8270C	27.5	mg/kg dry	0.011 U	0.011 U	0.011 U	< 0.24	< 0.22	< 1.1
	Fluoranthene	8270 SIM	364	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0233	0.379	0.0557 J		Di-n-butyl phthalate	8270C	31	mg/kg dry	0.021 U	0.021 U	0.022 U	< 0.47	< 0.44	< 2.2
	Fluorene	8270 SIM	54.8	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.374	1.39	0.184 J		Di-n-octyl phthalate	8270C	1829	mg/kg dry	< 0.021	< 0.022	< 0.022	< 0.47	0.054 J	< 2.2
	Naphthalene	8270 SIM	1.14	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.114	1.89	0.109		Fluoranthene	8270C	364	mg/kg dry	0.0012 J	0.0034	< 0.0022	0.072	0.54	< 0.22
	Phenanthrene	8270 SIM	79	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.664	4.21	0.277 J		Fluorene	8270C	54.8	mg/kg dry	< 0.0021	< 0.0022	< 0.0022	1.2	2.6	0.52
	Pyrene	8270 SIM	359	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.110	1.05	0.275		Indeno[1,2,3-cd]pyrene	8270C	0.15	mg/kg dry	0.0014 J	0.0025 J	< 0.0044	< 0.095	< 0.087	< 0.44
	1-Methylnaphthalene	8270 SIM	22	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	1.56	10.5	0.759		Naphthalene	8270C	1.14	mg/kg dry	0.0004 J	0.00048 J	0.00039 J	0.19	0.83	< 0.22
	2-Methylnaphthalene	8270 SIM	310	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	1.52	14.2	0.459		Phenanthrene	8270C	79	mg/kg dry	< 0.0021	0.00087 J	< 0.0022	1.6	4.7	0.47
	Aluminum	6010 / 6020	77000	mg/kg dry	6800	5500	6200	9000	9200	6500		Phenol	8270C	7.4	mg/kg dry	< 0.011	< 0.011	< 0.011	< 0.24	< 0.22	< 1.1
	Arsenic	6010 / 6020	0.4	mg/kg dry	17	6.8	7.8	9	7.8	15		Pyrene	8270C	359	mg/kg dry	0.0015 J	0.0037	0.00039 J	0.13	0.57	0.19 J
	Antimony	6010 / 6020	4.8	mg/kg dry	0.97	0.36	0.49	0.8	1.4	1.2		1,2,4-Trimethylbenzene	8260B	67	mg/kg dry	< 0.049	< 0.041	< 0.039	0.048 J	0.13	< 0.041
	Barium	6010 / 6020	896	mg/kg dry	47	34	42	90	90	40		1,2-Dichlorobenzene	8260B	5.25	mg/kg dry	< 0.049	< 0.041	< 0.039	0.037 J	0.037	0.015 J
	Beryllium	6010 / 6020	1.63	mg/kg dry	0.36	0.21	0.27	0.35	0.38	0.29		1,3,5-Trimethylbenzene	8260B	47	mg/kg dry	< 0.049	< 0.041	< 0.039	< 0.060	0.0075 J	< 0.041
	Calcium	6010 / 6020	NSA	mg/kg dry	25000	2000	1300	1500	1300	1100		1,4-Dichlorobenzene	8260B	0.076	mg/kg dry	< 0.049	< 0.041	< 0.039	< 0.060	< 0.030	0.0064 J
	Cadmium	6010 / 6020	1.35	mg/kg dry	0.13 J	0.17 J	0.11 J	0.16 J	0.14 J	0.13 J		4-Isopropyltoluene	8260B	NSA	mg/kg dry	0.0049 J	< 0.041	< 0.039	0.094	0.064	0.014 J
	Chromium	6010 / 6020	2135	mg/kg dry	6.2	7.3	7.6	9.9	9.8	7.4		Benzene	8260B	0.018	mg/kg dry	< 0.020	< 0.017	< 0.016	< 0.024	< 0.012	< 0.017
	Cobalt	6010 / 6020	23	mg/kg dry	11	6.1	7	8	7.8	7.9		cis-1,2-Dichloroethene	8260B	0.19	mg/kg dry	< 0.049	< 0.041	< 0.039	< 0.060	< 0.030	< 0.041
	Copper	6010 / 6020	921	mg/kg dry	23	20	21	25	45	23		Ethylbenzene	8260B	0.071	mg/kg dry	< 0.049	< 0.041	< 0.039	0.07	0.044	< 0.041
	Iron	6010 / 6020	5.8	mg/kg dry	16000	11000	12000	13000	12000	12000		Isopropylbenzene	8260B	3.46	mg/kg dry	< 0.049	< 0.041	< 0.039	0.16	0.082	0.069
	Lead	6010 / 6020	49.6	mg/kg dry	9.3	7.4	7.3	12	19	15		Methylene Chloride	8260B	0.017	mg/kg dry	0.03 U	0.011 U	0.017 U	0.081 U	0.066 U	< 0.041
	Magnesium	6010 / 6020	NSA	mg/kg dry	6300	3100	3500	5000	4500	3900		m-Xylene & p-Xylene	8260B	1.67	mg/kg dry	< 0.049	< 0.041	< 0.039	0.014 J	0.017 J	0.01 J
	Manganese	6010 / 6020	223	mg/kg dry	520	270	200	170	160	170		Naphthalene	8260B	1.14	mg/kg dry	< 0.049	< 0.041	< 0.03			

TABLE 3-2
Monitoring Well and Boring Soil Sample Results

Type	Analytes	Method	Screening Level mg/Kg	Units	Sample ID	G-BH1-Surf-	G-BH1-7.5-	G-BH1-16-	G-BH2-Surf-	G-BH2-7.5-	G-BH2-15-	G-BH3-Surf-	G-BH3-7.5-	G-BH3-15-	G-BH4-Surf-	G-BH4-7.5-	G-BH4-15-	G-BH5-Surf-	G-BH5-7.5-	G-BH5-15-	G-GA1-21-	G-GA3-20-		
					Collection Date	082809	082809	082809	082809	082809	082809	082709	082709	082709	082709	082709	082709	082709	082709	082709	082709	082709	082609	082609
					8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/26/2009	8/26/2009
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry		37.8	< 113	262	< 11	< 11.5	20.7	< 21.2	12.2	601	< 21.4	2380	19.2	30.1	1060	109	37.1 J	22.9 J		
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry		349	201	96.4	60.1	< 28.8	50.7	91.1	37.5	345	68.6	1360	<31.3	201	703	170	73.0 J	70.7 J		
PCBs	Aroclor 1016	8082	3.9	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
	Aroclor 1221	8082	0.17	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
	Aroclor 1232	8082	0.17	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
	Aroclor 1242	8082	0.22	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
	Aroclor 1248	8082	0.22	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
	Aroclor 1254	8082	0.22	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
	Aroclor 1260	8082	0.22	mg/kg dry		< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096		
Carcinogenic PAH	Benzo(a)anthracene	8270 SIM	0.15	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0059	0.00461	0.0426	< 0.00848	< 0.00485	0.0306	0.0114	0.0778	< 0.00459	< 0.00999	0.0413	0.00595 J	0.00449 UJ	0.00457 UJ		
	Benzo(a)pyrene	8270 SIM	0.02	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0073	0.00512	0.0146	< 0.00848	0.00497	0.0139	0.0129	0.0413	< 0.00459	0.0133	0.0171	< 0.00487	0.00449 UJ	0.00457 UJ		
	Benzo(b)fluoranthene	8270 SIM	0.15	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0102	0.0138	< 0.0109	< 0.00848	0.00646	< 0.00519	0.0324	0.0471	< 0.00459	0.0257	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ		
	Benzo(k)fluoranthene	8270 SIM	1.5	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	< 0.00461	< 0.0109	< 0.00848	< 0.00485	0.0208	< 0.00429	< 0.00865	< 0.00459	< 0.00999	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ		
	Chrysene	8270 SIM	15	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0063	0.0102	0.0839	< 0.00848	0.00895	0.0491	0.0100	0.1960	< 0.00459	0.0114	0.0816	0.0146 J	0.00449 UJ	0.00457 UJ		
	Dibenzo(a,h)anthracene	8270 SIM	0.02	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0093	< 0.00461	< 0.0109	< 0.00848	< 0.00485	0.0081	0.0048	< 0.00865	< 0.00459	< 0.00999	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ		
	Indeno(1,2,3-cd)pyrene	8270 SIM	0.15	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0083	< 0.00461	0.0109	< 0.00848	< 0.00485	0.0075	0.0067	0.0087	< 0.00459	0.0124	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ		
Non- Carcinogenic PAH	Acenaphthene	8270 SIM	52.3	mg/kg dry		<0.0048	<0.00452	0.00584	< 0.00476	< 0.00461	0.3680	< 0.00848	< 0.00485	0.0381	< 0.00429	0.1680	< 0.00459	< 0.00999	0.347 J	0.0271 J	0.00449 UJ	0.00457 UJ		
	Acenaphthylene	8270 SIM	78	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	< 0.00461	< 0.0109	< 0.00848	< 0.00485	< 0.00519	< 0.00429	< 0.00865	< 0.00459	< 0.00999	0.0106 UJ	< 0.00487	0.00449 UJ	0.00457 UJ		
	Anthracene	8270 SIM	1040	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	< 0.00461	< 0.0109	< 0.00848	< 0.00485	0.1080	< 0.00429	0.6150	< 0.00459	< 0.00999	0.315 J	0.0173 J	0.00499 J	0.00457 UJ		
	Benzo(g,h,i)perylene	8270 SIM	1178	mg/kg dry		<0.0048	<0.00452	< 0.00487	0.0107	0.00563	0.0243	0.0160	0.00597	0.0098	0.0091	0.0211	< 0.00459	0.0200	0.0151	0.00487 J	0.00449 UJ	0.00457 UJ		
	Fluoranthene	8270 SIM	364	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	0.00922	0.0511	< 0.00848	0.00994	0.0294	0.0076	0.1530	< 0.00459	< 0.00999	0.0826	0.0146 J	0.00449 UJ	0.00457 UJ		
	Fluorene	8270 SIM	54.8	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	< 0.00461	0.5120	< 0.00848	< 0.00485	0.0531	< 0.00429	0.2800	< 0.00459	< 0.00999	0.545	0.0401 J	0.00499 J	0.00457 UJ		
	Naphthalene	8270 SIM	1.14	mg/kg dry		<0.0048	<0.00452	0.00908	< 0.00476	0.00768	0.2600	< 0.00848	< 0.00485	< 0.00519	< 0.00429	< 0.00865	< 0.00459	< 0.00999	0.504	0.0541 J	0.00449 UJ	0.00457 UJ		
	Phenanthrene	8270 SIM	79	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	0.00973	0.7860	< 0.00848	0.0104	0.2310	< 0.00429	1.6400	0.000501	< 0.00999	0.802	0.0487 J	0.00449 UJ	0.00457 UJ		
	Pyrene	8270 SIM	359	mg/kg dry		<0.0048	<0.00452	< 0.00487	< 0.00476	0.0164	0.4400	< 0.00848	0.00994	0.1070	0.0224	0.1460	< 0.00459	0.0238	0.494	0.0514 J	0.00449 UJ	0.00457 UJ		
	1-Methylnaphthalene	8270 SIM	22	mg/kg dry		<0.0048	<0.00452	0.0279	< 0.00476	0.00973	0.8110	< 0.00848	0.00547	0.1490	< 0.00429	1.7400	< 0.00459	< 0.00999	4.04	0.0769 J	0.00449 UJ	0.00457 UJ		
	2-Methylnaphthalene	8270 SIM	310	mg/kg dry		<0.0048	<0.00452	0.00779	< 0.00476	0.0159	0.5700	< 0.00848	0.00795	0.0358	< 0.00429	1.6000	< 0.00459	< 0.00999	5.21	0.0628 J	0.00449 UJ	0.00457 UJ		

Notes:

Bold - Detection is above media Screening Levels

NSA - No screening level available.

" < " - The analyte is not detected above the reporting quantitation limit.

U - Analyte not detected above the reported amount as a result of validation rules.

J - The analyte is positively idenitified. However, the result is an estimated value.

UJ - The analyte was not detected above the reporting quantitation limit. However the reporting limit is approximate.

R - The data is rejected due to a deficiency in quality control criteria.

TABLE 3-6
Groundwater Results

					Sample ID	G-GA1-090509	G-GA1-090509	G-GA2-090209	G-GA3-090309	G-GA3-090309	G-GA4-090209	G-GA4-090209	G-DW01-090209	G-DW01-090209	G-MW5-090309	G-HC1R 090409	G-EW3-090409	G-EW3-090409	G-EW4-090409	G-EMW04-090409	G-EMW04-090409	G-EMW05-090509	G-EMW05-090509	G-EMW06-090509	G-EMW06-090509
					Collection Date	09/05/09	09/05/09	9/2/2009	9/3/2009	9/3/2009	9/2/2009	9/2/2009	9/2/2009	9/2/2009	9/3/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	09/05/09	09/05/09	9/5/2009	9/5/2009
Type	Analytes	Method	Level	Idaho Surface Water Standards*	Units																				
TPH	Diesel Range Organics	NWTPH-Dx	NSA	NSA	ug/L	352 J	---	< 243	< 243	---	< 243	---	< 243	---	484	992	1850	---	< 236	< 236	---	611	---	546	---
	Heavy Oils	NWTPH-Dx	NSA	NSA	ug/L	472 UJ	---	< 485	< 485	---	< 485	---	< 485	---	713	637	1600	---	< 472	< 472	---	< 472	---	< 481	---
PCBs	Aroclor 1016	8082	0.5	0.000064	ug/L	0.047 UJ	---	< 0.047	< 0.047	---	< 0.047	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
	Aroclor 1221	8082	0.0068	0.000064	ug/L	0.047 UJ	---	0.047 UJ	0.047 UJ	---	0.047 UJ	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
	Aroclor 1232	8082	0.0068	0.000064	ug/L	0.047 UJ	---	0.047 UJ	0.047 UJ	---	0.047 UJ	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
	Aroclor 1242	8082	0.028	0.000064	ug/L	0.047 UJ	---	0.047 UJ	0.047 UJ	---	0.047 UJ	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
	Aroclor 1248	8082	0.028	0.000064	ug/L	0.047 UJ	---	0.047 UJ	0.047 UJ	---	0.047 UJ	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
	Aroclor 1254	8082	0.034	0.000064	ug/L	0.047 UJ	---	0.047 UJ	0.047 UJ	---	0.047 UJ	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
	Aroclor 1260	8082	0.028	0.000064	ug/L	0.047 UJ	---	< 0.047	< 0.047	---	< 0.047	---	N/A	---	N/A	N/A	N/A	---	N/A	N/A	---	N/A	---	N/A	---
					ug/L																				
Carcinogenic PAH	Benzo(a)anthracene	8270 SIM	0.029	0.0038	ug/L	0.0024 J	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	0.0081 J	< 0.0094	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0096	---	0.0040 J	---
	Benzo(a)pyrene	8270 SIM	0.0029	0.0038	ug/L	< 0.019	---	< 0.019	< 0.019	---	< 0.019	---	< 0.019	---	< 0.019	< 0.019	< 0.019	---	< 0.019	< 0.019	---	< 0.019	---	< 0.019	---
	Benzo(b)fluoranthene	8270 SIM	0.029	0.0038	ug/L	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	< 0.0095	< 0.0094	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0096	---	< 0.0094	---
	Benzo(k)fluoranthene	8270 SIM	0.29	0.0038	ug/L	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	< 0.0095	< 0.0094	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0096	---	< 0.0094	---
	Chrysene	8270 SIM	2.9	0.0038	ug/L	0.0065 J	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	0.011	< 0.0094	0.0023 J	---	< 0.0094	0.0052 J	---	0.0024 J	---	0.0068 J	---
	Dibenzo(a,h)anthracene	8270 SIM	0.0029	0.0038	ug/L	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	< 0.0095	< 0.0094	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0096	---	< 0.0094	---
	Indeno(1,2,3-cd)pyrene	8270 SIM	0.029	0.0038	ug/L	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	< 0.0095	< 0.0094	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0096	---	< 0.0094	---
					ug/L																				
Non-Carcinogenic PAH	Acenaphthene	8270 SIM	626	670	ug/L	0.20	---	0.0029 J	0.025	---	< 0.0094	---	0.0011 J	---	0.5	0.21	0.040	---	0.0094 U	0.049	---	1.0	---	1.6	---
	Acenaphthylene	8270 SIM	626	NSA	ug/L	0.042	---	< 0.0094	0.0050 J	---	< 0.0094	---	0.0016 J	---	0.081	0.027	0.0055 J	---	< 0.0094	0.0073 J	---	0.13	---	0.25	---
	Anthracene	8270 SIM	3,129	8,300	ug/L	0.033	---	0.0021 J	< 0.0094	---	0.00083 J	---	0.0016 J	---	0.088	0.036	0.0096	---	0.0094 U	0.017	---	0.19	---	0.26	---
	Benzo(g,h,i)perylene	8270 SIM	313	NSA	ug/L	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0094	---	< 0.0094	---	0.0021 J	< 0.0094	< 0.0094	---	< 0.0094	< 0.0094	---	< 0.0096	---	< 0.0094	---
	Fluoranthene	8270 SIM	417	130	ug/L	0.018	---	0.0032 J	0.0087 J	---	< 0.0094	---	< 0.0094	---	0.023	0.0094 U	0.014	---	0.0094 U	0.0094 U	---	0.048	---	0.060	---
	Fluorene	8270 SIM	417	1,100	ug/L	0.47	---	0.0034 J	0.019	---	0.0020 J	---	0.0012 J	---	0.47	0.12	0.054	---	0.0094 U	0.078	---	1.3	---	2.3	---
	Naphthalene	8270 SIM	0.14	NSA	ug/L	0.039	---	0.0062 J	0.040	---	0.0074 J	---	< 0.0094	---	0.22	0.078	0.017	---	0.0094 U	0.042	---	2.4	---	5.8	---
	Phenanthrene	8270 SIM	313	NSA	ug/L	0.040	---	0.0094 U	0.020	---	0.0094 U	---	0.0094 U	---	0.14	0.0099	0.036	---	0.0094 U	0.014	---	1.3	---	2.0	---
	Pyrene	8270 SIM	313	830	ug/L	0.019	---	0.0094 U	0.0097 U	---	0.0094 U	---	< 0.0094	---	0.064	0.014	0.033	---	0.0094 U	0.015	---	0.055	---	0.074	---
	1-Methylnaphthalene	8270 SIM	0.14	NSA	ug/L	0.077	---	0.0094 U	0.021	---	0.0094 U	---	0.0094 U	---	1.1	0.069	0.045	---	0.0094 U	0.034	---	9.7	---	14	---
	2-Methylnaphthalene	8270 SIM	150	NSA	ug/L	< 0.012	---	0.0037	0.020	---	0.0048 J	---	< 0.012	---	0.094	0.012	0.012 U	---	< 0.012	0.066	---	1.6	---	6.7	---
	Aluminum	6010 / 6020	200	NSA	ug/L	< 500	---	400 U	400 U	---	71 J	---	400 U	---	3700	< 500	< 500	12	< 500	< 500	14	< 500	12	< 500	20
	Arsenic	6010 / 6020	50	50*	ug/L	6.3	9.6	< 2.0	0.91 J	---	< 2.0	---	< 2.0	---	10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	15	17	52	63	23
	Antimony	6010 / 6020	6	5.6	ug/L	0.78 J	---	< 2.0	1.5 J	---	2.8	---	1.8 J	---	1.5 J	1.4 J	0.95 J	0.9	0.74 J	0.62 J	2.2	< 2.0	1.9	< 2.0	1.8
	Barium	6010 / 6020	2000	NSA	ug/L	94	---	77	38	---	25	---	19	---	55	8.1	25	23	62	61	57	59	45	44	
	Beryllium	6010 / 6020	4	NSA	ug/L	< 2.0	---	< 2.0	< 2.0	---	< 2.0	---	< 2.0	---	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Metals	Calcium	6010 / 6020	NSA	NSA	ug/L	70000	---	27000	21000	---	34000	---	38000	---	24000	12000	61000	29000	29000	69000	69000	34000	35000	36000	34000
	Cadmium	6010 / 6020	5	0.6	ug/L	< 2.0	---	< 2.0	< 2.0	---	< 2.0	---	< 2.0	---	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
	Chromium	6010 / 6020	100	74	ug/L	< 2.0	---	0.71 J	0.38 J	---	0.62 J	---	< 2.0	---	4.3	0.52 J	< 2.0	0.6	< 2.0	< 2.0	0.7	< 2.0	0.8	< 2.0	1
	Cobalt	6010 / 6020	11	NSA	ug/L	1.2 J	---	0.7 J	0.38 J	---	1.3 J	---	< 2.0	---	3.2	< 2.0	1.1 J	0.82	0.45 J	0.6 J	1.7	0.42 J	1.4	< 2.0	1.3
	Copper	6010 / 6020	1000	11	ug/L	1.3 J	---	2.6 J	1.6 J	---	3.7 J	---	2 J	---	18	0.82 J	0.83 J	0.68	0.84 J	0.81 J	0.4	0.77 J	0.22	0.64 J	0.21
	Iron	6010 / 6020	300	NSA	ug/L	7800	8000	65 J	53 J	---	< 200	---	8,800	1,100	10,000	200	38,000	5,100	2,300	20,000	19,000	19,000	19,000	12,000	11,000
	Lead	6010 / 6020	15	2.5	ug/L	< 2.0	---	0.18 J	< 2.0	---	< 2.0	---	0.3 J	---	12	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
	Magnesium	6010 / 6020	NSA	NSA	ug/L	11000	---	6600	3300	---	9900	---	11000	---	8000	2500	8700	6400	8000	11000	6900	6800	7800	7500	
	Manganese	6010 / 6020	50	NSA	ug/L	2000	---	250	440	470	180	180	---	1,400	8.5 J	3800	210	180	1,400	1,300	2,200	2,300	1,000	980	
	Mercury	7470A / 7471B	1	NSA	ug/L	< 0.2	---	< 0.02	< 0.02	---	< 0.02	---	< 0.02	---	0.073 J	< 0.2	< 0.2	< 0.2	0.12 J	0.074 J	< 0.20	0.079 J	< 0.20	0.12 J	< 0.20
	Nickel	6010 / 6020	209	52	ug/L	2.																			

**TABLE 3-7
LNAPL Results**

	Analytes	Method	Screening Level mg/kg	Sample ID Collection Date Units	G-MW11FP-090109	G-P1010FP-090409	G-HC4FP-111909	G-RS5FP-090509	G-RS4FP-090509	G-RS3FP-090509	G-RS3aFP-090509
					9/1/2009	9/4/2009	11/19/2009	9/5/2009	9/5/2009	9/5/2009	9/5/2009
TPH (mg/kg)	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg	202000	201000	581000	233000	386000	154000	80700
	Heavy Oils	NWTPH-Dx	NSA	mg/kg	321000	120000	255000	265000	306000	149000	67500
	Aroclor 1016	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1221	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1232	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1242	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1248	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1254	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1260	8082	NSA	mg/kg	0.37 J	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Benzo(a)anthracene	8270 SIM	NSA	mg/kg	40000	4.42	22.00	19.2 J	3.06 UJ	10.40	3.27
PCBs (mg/kg)	Benzo(a)pyrene	8270 SIM	NSA	mg/kg	25000	4.62	<15	8.57	11.0 J	3.96	< 2.73
	Benzo(b)fluoranthene	8270 SIM	NSA	mg/kg	20000	2.88	<15	3.06	3.06 UJ	< 3.12	< 2.73
	Benzo(k)fluoranthene	8270 SIM	NSA	mg/kg	3000 J	2.88	<15	3.06	3.06 UJ	< 3.12	< 2.73
	Chrysene	8270 SIM	NSA	mg/kg	71000	9.04	30.00	45.7 J	50.6 J	23.1	7.27
	Dibenzo(a,h)anthracene	8270 SIM	NSA	mg/kg	< 32000	9.62	<15	4.29	4.90 J	< 3.12	2.73
	Indeno(1,2,3-cd)pyrene	8270 SIM	NSA	mg/kg	4700 J	10.2	<15	4.49	3.88 J	< 3.12	2.91
	Acenaphthene	8270 SIM	NSA	mg/kg	42000	29.2	372	33.1	100	30.2	16.5
	Acenaphthylene	8270 SIM	NSA	mg/kg	< 16000	2.88	<15	3.06	3.06 UJ	< 3.12	< 2.73
	Anthracene	8270 SIM	NSA	mg/kg	26000	33.5	209	96.9	120	50.4	20.2
	Benzo(g,h,i)perylene	8270 SIM	NSA	mg/kg	6700 J	14.0	<15	9.59	12.2 J	3.12	3.64
Carcinogenic PAH (mg/kg)	Fluoranthene	8270 SIM	NSA	mg/kg	69000	8.27	56	9.18	15.1	9.38	4.00
	Fluorene	8270 SIM	NSA	mg/kg	68000	45.6	316	86.3	178 J	45.6	25.3
	Naphthalene	8270 SIM	NSA	mg/kg	< 16000	13.3	252	3.06	3.06 UJ	7.29	6.91
	Phenanthrene	8270 SIM	NSA	mg/kg	140000	88.8	889	205	292	84.0	47.8
	Pyrene	8270 SIM	NSA	mg/kg	110000	22.7	128	118	161 J	55.8	15.3
	1-Methylnaphthalene	8270 SIM	NSA	mg/kg	52000	114	1350	15.3	328	63.1	47.6
	2-Methylnaphthalene	8270 SIM	NSA	mg/kg	16000 J	48.3	1870	3.06	35.3	< 3.12	45.6
	Aluminum	6010 / 6020	NSA	mg/kg	110 UJ	1500	39	360	340	120 J	85 J
	Arsenic	6010 / 6020	NSA	mg/kg	2.2 J	4.8 J	2	4.6 J	4.4 J	1.7 J	1.2 J
	Antimony	6010 / 6020	NSA	mg/kg	< 11	< 12	<8.6	< 12	< 12	< 13	< 11
Non-Carcinogenic PAH (mg/kg)	Barium	6010 / 6020	NSA	mg/kg	2.4	24	1.5	7.4	5.9	3.4	2.2
	Beryllium	6010 / 6020	NSA	mg/kg	< 0.88	0.055 J	<0.72	< 1.0	< 0.97	< 1.1	< 0.93
	Calcium	6010 / 6020	NSA	mg/kg	43 J	570	21	470	340	340	280
	Cadmium	6010 / 6020	NSA	mg/kg	< 1.8	< 2	<1.4	< 2	< 1.9	< 2.2	< 1.9
	Chromium	6010 / 6020	NSA	mg/kg	13 J	1.8 J	1.1	2.1 J	2.0 J	0.47 J	< 4.8
	Cobalt	6010 / 6020	NSA	mg/kg	0.48 J	1.8 J	0.13	0.65 J	0.56 J	0.28 J	< 1.9
	Copper	6010 / 6020	NSA	mg/kg	38 J	12	2.2	69	71	12	4.6
	Iron	6010 / 6020	NSA	mg/kg	120 J	2300	42	390	170	57	130
	Lead	6010 / 6020	NSA	mg/kg	15	3.2 J	<4.3	24	27	< 6.7	< 5.6
	Magnesium	6010 / 6020	NSA	mg/kg	190 U	800	6.7	220 U	210 U	250 U	200 U
Total Metals (mg/kg)	Manganese	6010 / 6020	NSA	mg/kg	1.6 J	31	0.78	8.7	2.9 J	1.4 J	1.2 J
	Mercury	7470A /	NSA	mg/kg	0.018	< 0.036	<0.018	0.034 J	0.034 J	0.019 J	0.013 J
	Nickel	6010 / 6020	NSA	mg/kg	31 J	9.7	11	39	34	20	4.6
	Potassium	6010 / 6020	NSA	mg/kg	580 UJ	290 J	<480	180 J	< 640	< 740	< 610
	Selenium	6010 / 6020	NSA	mg/kg	< 18	< 20	<14	1.6 J	0.63 J	< 22	< 19
	Silver	6010 / 6020	NSA	mg/kg	< 3.5	< 4	<2.9	< 4.1	< 3.9	< 4.5	< 3.7
	Sodium	6010 / 6020	NSA	mg/kg	< 350	780 J	<290	850	970	1100	1100
	Thallium	6010 / 6020	NSA	mg/kg	18 U	< 20	<14	< 20	< 19	< 22	< 19
	Vanadium	6010 / 6020	NSA	mg/kg	26 J	8.5	15	110	140	16	4.1
	Zinc	6010 / 6020	NSA	mg/kg	6.9 J	21	<7.2	67	15	12	5.6 J

Notes:

Bold - Detection is above media Screening Levels

NSA - No screening level available.

" < " - The analyte is not detected above the reporting quantitation limit.

U - Analyte not detected above the reported amount as a result of validation rules.

J - The analyte is positively identified. However, the result is an estimated value.

UJ - The analyte was not detected above the reporting quantitation limit. However the reporting limit is approximate.

R - The data is rejected due to a deficiency in quality control criteria.

TABLE 3-9
Near Shore Sediment Results

					G-RS1SED-0-090709	G-RS1SED-4-090709	G-RS2SED-0-090709	G-RS2SED-3-090709	G-RS3SED-0-090709	G-RS3SED-4-090709	G-RS4SED-0-090709	G-RS4SED-4-090709	G-RS-5SED-0-090809	G-RS5SED-4-090709	G-RS6SED-0-090709	G-RS6SED-3-090709	G-RS7SED-0-090709	G-RS7SED-4-090709	G-RS8SED-0-090709	G-RS8SED-3-090709	
					9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/8/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	
Type	Analytes	Method	Screening Level mg/Kg	Sample ID Collection Date	Units																
TPH	Diesel Range Organics	NWTPH-Dx	NSA		mg/kg dry	ND	66.3	74.3	62.4	194	403	8830	39.6	24.3	73.1	22.4	25.3	< 14.9	< 11.8	< 14.7	< 12.5
	Heavy Oils	NWTPH-Dx	NSA		mg/kg dry	89	464	336	272	492	588	6980	164	112	178	140	126	< 37.3	< 29.6	< 36.7	< 31.3
PCBs	Aroclor 1016	8082	0.026		mg/kg dry	0.0097 U	0.0097 U	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
	Aroclor 1221	8082	0.026		mg/kg dry	0.0097 U	0.0097 U	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
	Aroclor 1232	8082	0.026		mg/kg dry	0.0097 U	0.0097 U	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
	Aroclor 1242	8082	0.026		mg/kg dry	0.0097 U	0.0097 U	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
	Aroclor 1248	8082	0.026		mg/kg dry	0.0097 U	0.0097 U	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
	Aroclor 1254	8082	0.026		mg/kg dry	0.0097 U	0.0097 U	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
	Aroclor 1260	8082	0.026		mg/kg dry	0.0097 U	0.01	0.0098 U	0.0096 U	<0.0096	< 0.010	<0.0097	<0.0096	<0.010	< 0.010	<0.010	< 0.0098	0.0095 U	0.0099 U	0.0099 U	0.0095 U
Carcinogenic PAH	Benzo(a)anthracene	8270 SIM	0.016		mg/kg dry	0.00494 UJ	0.0085 R	0.00498 UJ	0.00841 R	0.00471 R	0.0709 J	0.00947 R	< 0.00477	0.00586	0.0326	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Benzo(a)pyrene	8270 SIM	0.032		mg/kg dry	0.00494 UJ	0.0085 R	0.00498 UJ	0.00841 R	0.0101 J	0.0333 J	0.0455 J	< 0.00477	0.00521	0.0774	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Benzo(b)fluoranthene	8270 SIM	0.027		mg/kg dry	0.0155 J	0.0147 J	0.00498 UJ	0.00841 R	0.00471 R	0.0388 J	0.00947 R	< 0.00477	< 0.00488	0.143	< 0.00462	0.00499 R	0.0053 J	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Benzo(k)fluoranthene	8270 SIM	0.027		mg/kg dry	0.00494 UJ	0.0085 R	0.00498 UJ	0.00841 R	0.00471 R	0.0467 J	< 0.00477	0.01040	< 0.00498	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ	
	Chrysene	8270 SIM	0.027		mg/kg dry	0.00941 J	0.00907 J	0.00498 UJ	0.00841 R	0.0101 J	0.129 J	0.0455 J	< 0.00477	0.00976	0.0625	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Dibenzo(a,h)anthracene	8270 SIM	0.006		mg/kg dry	0.00494 UJ	0.00907 J	0.00745 J	0.00897 J	0.0151 J	0.0111 J	0.0152 J	0.00796	< 0.00488	0.037	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Indeno(1,2,3-cd)pyrene	8270 SIM	0.017		mg/kg dry	0.00494 UJ	0.0113 J	0.00881 J	0.00841 R	0.0182 J	0.0144 J	0.0114 J	0.00849	< 0.00488	0.0746	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Acenaphthene	8270 SIM	0.0067		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0101	0.1030	< 0.00947	< 0.00477	< 0.00488	0.0453	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Acenaphthylene	8270 SIM	0.0059		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	< 0.00831	< 0.00947	< 0.00477	< 0.00488	< 0.00498	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Anthracene	8270 SIM	0.01		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.00817	0.1200	< 0.00947	< 0.00477	< 0.00488	0.0122	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Benzo(g,h,i)perylene	8270 SIM	0.17		mg/kg dry	0.00672 J	0.0193 J	0.0115 J	0.0112 J	0.0277 J	0.0299 J	0.0101 J	0.0101	0.00586	0.106	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Fluoranthene	8270 SIM	0.031		mg/kg dry	0.00874 J	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	0.0521	0.0189 J	< 0.00477	0.00716	0.0293	0.00616	< 0.00499	0.0139 J	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Fluorene	8270 SIM	0.01		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0151	0.0998	< 0.00947	< 0.00477	< 0.00488	0.084	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Naphthalene	8270 SIM	0.015		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	< 0.00831	< 0.00947	< 0.00477	< 0.00488	0.0122	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Phenanthrene	8270 SIM	0.019		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0214	0.3540	< 0.00947	< 0.00477	< 0.00488	0.0802	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
	Pyrene	8270 SIM	0.044		mg/kg dry	0.0087	0.0204 J	0.00498 UJ	0.00841 R	0.027 J	0.44 J	0.096 J	0.00636	0.01430	0.129	0.00555	< 0.00499	0.0119 J	0.00473 UJ	0.00489 UJ	0.00417 UJ
	1-Methylnaphthalene	8270 SIM	NSA		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0176	0.0964	< 0.00947	< 0.00477	< 0.00488	0.101	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ
2-Methylnaphthalene	8270 SIM	0.02		mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	< 0.00831	< 0.00947	< 0.00477	< 0.00488	< 0.00498	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ	
Total Metals	Aluminum	6010 / 6020	25500		mg/kg dry	5300	4700	6700	4100	5100	5000	4600	3900	6900	5000	6900	6500	6900	3300	7000	5400
	Arsenic	6010 / 6020	5.9		mg/kg dry	5.8	7.3	7.6	6.2	10	9.9	16	16	8.5	28	7.1	9.9	7	7.5	6.4	5.4
	Antimony	6010 / 6020	2		mg/kg dry	1.3	3.5	1.9	5.5	2.3	1.3	24	1.1	1.2	8.3	0.85	0.93	0.68	210	0.64	0.75
	Barium	6010 / 6020	NSA		mg/kg dry	31	34	46	24	32	38	35	24	39	37	36	49	38	16	37	27
	Beryllium	6010 / 6020	NSA		mg/kg dry	0.24	0.26	0.29	0.16 J	0.26	0.24	0.24 J	0.17 J	0.28	0.26	0.27	0.26 J	0.28	0.13 J	0.31	0.21 J
	Calcium	6010 / 6020	NSA		mg/kg dry	830	1300	8500	2700	1400	1500	1100	850	1300	970	1000	890	1200	590	1100	1200
	Cadmium	6010 / 6020	0.58		mg/kg dry	0.28 U	0.23 U	0.26 U	0.24 U	0.26 U	0.22 U	< 0.24	0.23 U	0.28 U	0.24 U	0.25 U	0.28 U	0.27 U	< 0.23	0.29 U	0.24 U
	Chromium	6010 / 6020	26		mg/kg dry	6.7	7.1	8.2	5.3	6.2	6.2	6.1	5	7.8	7.8	7.8	7.1	7.7	5.9	7.8	6.3
	Cobalt	6010 / 6020	50		mg/kg dry																

TABLE 3-9
Near Shore Sediment Results

					G-RS1SED-0-090709	G-RS1SED-4-090709	G-RS2SED-0-090709	G-RS2SED-3-090709	G-RS3SED-0-090709	G-RS3SED-4-090709	G-RS4SED-0-090709	G-RS4SED-4-090709	G-RS-5SED-0-090809	G-RS5SED-4-090709	G-RS6SED-0-090709	G-RS6SED-3-090709	G-RS7SED-0-090709	G-RS7SED-4-090709	G-RS8SED-0-090709	G-RS8SED-3-090709
					9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/8/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009	9/7/2009
Type	Analytes	Method	Screening Level mg/Kg	Sample ID Collection Date	Units															
Semivolatiles	1-Methylnaphthalene	8270C	NSA	mg/kg dry	< 0.043	0.0086 J	0.0098	0.0056	0.05	0.11	5	0.0033 J	0.0063	0.087	0.0015 J	0.00097 J	< 0.0043	< 0.0036	< 0.0044	0.00027 J
	2,6-Dinitrotoluene	8270C	NSA	mg/kg dry	< 0.029	< 0.024	< 0.014	< 0.013	< 0.14	< 0.12	< 0.12	< 0.11	< 0.014	< 0.012	< 0.013	0.0031 J	< 0.014	< 0.012	< 0.015	< 0.012
	2-Chloronaphthalene	8270C	NSA	mg/kg dry	< 0.14	< 0.12	0.0013 J	0.0037	< 0.027	< 0.023	< 0.024	< 0.023	< 0.0028	< 0.0024	< 0.0026	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023
	2-Methylnaphthalene	8270C	0.020	mg/kg dry	0.0069 J	0.021 J	0.019	0.011	0.0055 J	0.016 J	0.47	0.0048 J	0.013	< 0.0024	0.0028	0.002 J	0.00044 J	0.00035 J	< 0.0029	0.00071 J
	3 & 4 Methylphenol	8270C	NSA	mg/kg dry	< 0.29	< 0.24	0.0023 J	< 0.025	< 0.27	< 0.23	< 0.24	< 0.23	0.0022	< 0.024	< 0.026	0.002 J	0.0071 J	< 0.024	< 0.029	< 0.023
	Acenaphthene	8270C	0.0067	mg/kg dry	< 0.029	< 0.024	0.0016 J	< 0.0025	0.032	0.18	1.9	< 0.023	0.0031	0.041	< 0.0026	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023
	Acenaphthylene	8270C	0.0059	mg/kg dry	< 0.029	< 0.024	0.0025 J	0.0046	< 0.027	< 0.023	< 0.024	< 0.023	0.0025	< 0.0024	0.00098 J	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023
	Anthracene	8270C	0.057	mg/kg dry	0.0078 J	0.014 J	0.0034	0.0057	0.017 J	0.1	0.23	< 0.023	0.0036	0.01	0.002 J	0.00081 J	0.0012 J	0.00036 J	< 0.0029	< 0.0023
	Benzo(a)anthracene	8270C	0.016	mg/kg dry	0.04	0.012 J	0.0034 J	0.0029 J	< 0.034	0.1	0.48	< 0.028	0.0089	0.0059	0.0058	0.00042 J	0.0022 J	0.00066 J	0.00087 J	< 0.0029
	Benzo(a)pyrene	8270C	0.032	mg/kg dry	0.0066 J	< 0.036	0.0052	0.0064	< 0.041	0.097	< 0.035	< 0.034	0.0074	0.0069	0.0062	0.00098 J	< 0.0043	< 0.0036	< 0.0044	< 0.0035
	Benzo(b)fluoranthene	8270C	0.027	mg/kg dry	< 0.029	< 0.024	0.0069	0.013	< 0.027	0.078	< 0.024	< 0.023	0.018	0.0052	0.01	0.0015 J	0.0024 J	< 0.0024	< 0.0029	< 0.0023
	Benzo(g,h,i)perylene	8270C	0.17	mg/kg dry	< 0.036	0.022 J	0.0074	0.015	0.028 J	0.038	0.12	< 0.028	0.009	0.005	0.0049	0.0023 J	< 0.0036	< 0.0030	< 0.0037	< 0.0029
	Benzo(k)fluoranthene	8270C	0.027	mg/kg dry	< 0.036	< 0.030	0.0016 J	0.0015 J	< 0.034	0.027 J	< 0.030	< 0.028	0.0037	< 0.0030	0.0022 J	0.00061 J	< 0.0036	< 0.0030	< 0.0037	< 0.0029
	Benzoic acid	8270C	0.65	mg/kg dry	< 3.6	< 3.0	0.099 J	0.12 J	< 3.4	< 2.9	< 3.0	< 2.8	0.11	< 0.30	< 0.33	< 0.37	< 0.36	< 0.30	< 0.37	< 0.29
	Benzyl alcohol	8270C	NSA	mg/kg dry	< 0.14	< 0.12	< 0.014	< 0.013	< 0.14	< 0.12	< 0.12	< 0.11	< 0.014	< 0.012	< 0.013	< 0.015	< 0.014	< 0.012	0.0017 J	< 0.012
	Bis(2-ethylhexyl)phthalate	8270C	0.18	mg/kg dry	< 2.1	< 1.8	< 0.21	0.0078 J	< 2.1	< 1.8	< 1.8	< 1.7	0.0076	< 0.18	0.01 J	0.0068 J	< 0.22	< 0.18	< 0.22	< 0.17
	Carbazole	8270C	NSA	mg/kg dry	< 0.21	< 0.18	0.0013 J	0.0023 J	< 0.21	< 0.18	< 0.18	< 0.17	0.0024	< 0.018	0.0011 J	< 0.022	< 0.018	< 0.022	< 0.018	0.00075 J
	Chrysene	8270C	0.027	mg/kg dry	0.0098 J	0.029 J	0.0083	0.016	< 0.034	0.29	1	0.0035 J	0.021	0.013	0.0085	0.0033 J	0.0054	< 0.0030	< 0.0037	< 0.0029
	Dibenzo(a,h)anthracene	8270C	0.0062	mg/kg dry	< 0.057	< 0.047	0.0017 J	< 0.0051	< 0.055	< 0.047	< 0.047	< 0.046	0.0026	< 0.0048	0.0017 J	< 0.0059	< 0.0058	< 0.0048	< 0.0059	< 0.0047
	Dibenzofuran	8270C	0.42	mg/kg dry	< 0.14	0.015 J	0.0032 J	0.003 J	< 0.14	< 0.12	< 0.12	< 0.11	0.0064	< 0.012	0.00093 J	< 0.015	< 0.014	< 0.012	< 0.015	< 0.012
	Diethylphthalate	8270C	0.60	mg/kg dry	< 0.14	< 0.12	< 0.014	0.013 U	< 0.14	< 0.12	< 0.12	< 0.11	0.014 U	< 0.012	0.013 U	< 0.015	0.014 U	0.012 U	0.015 U	0.012 U
	Di-n-butyl phthalate	8270C	0.11	mg/kg dry	< 0.29	< 0.24	0.028 U	0.025 U	< 0.27	< 0.23	< 0.24	< 0.23	0.028 U	< 0.024	0.026 U	0.029 U	0.029 U	0.024 U	0.029 U	0.023 U
	Di-n-octyl phthalate	8270C	NSA	mg/kg dry	< 0.29	< 0.24	0.0018 J	< 0.025	< 0.27	< 0.23	< 0.24	< 0.23	0.0039	< 0.024	< 0.026	< 0.029	< 0.029	< 0.024	< 0.029	< 0.023
	Fluoranthene	8270C	0.03	mg/kg dry	0.016 J	0.04	0.0065	0.0045	< 0.027	0.15	0.68	0.0065 J	0.013	0.0078	0.014	0.0016 J	0.014	0.00036 J	0.0011 J	0.00066 J
	Fluorene	8270C	0.010	mg/kg dry	< 0.029	< 0.024	< 0.0028	< 0.0025	0.059	0.17	3.1	< 0.023	0.0047	0.08	< 0.0026	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023
	Indeno(1,2,3-cd)pyrene	8270C	0.017	mg/kg dry	0.024 J	0.035 J	0.0043 J	0.0064	< 0.055	0.025 J	< 0.047	< 0.046	0.0053	0.0023 J	0.004 J	0.0016 J	< 0.0058	< 0.0048	< 0.0059	< 0.0047
	Isophorone	8270C	NSA	mg/kg dry	< 0.14	< 0.12	< 0.014	< 0.013	< 0.14	< 0.12	< 0.12	< 0.11	< 0.014	< 0.012	< 0.013	< 0.015	< 0.014	< 0.012	< 0.015	< 0.012
	Naphthalene	8270C	0.015	mg/kg dry	< 0.029	0.019 J	0.0068	0.005	< 0.027	< 0.023	< 0.024	< 0.023	0.0081	0.013	0.0016 J	< 0.0029	< 0.0029	< 0.0024	< 0.0029	0.00048 J
	Phenanthrene	8270C	0.019	mg/kg dry	0.017 J	0.04	0.01	0.01	0.078	0.48	5	< 0.023	0.015	0.08	0.0043	0.0014 J	0.0081	0.00053 J	< 0.0029	< 0.0023
	Phenol	8270C	0.048	mg/kg dry	< 0.14	< 0.12	0.0055 J	0.0021 J	< 0.14	< 0.12	< 0.12	< 0.11	0.0023	< 0.012	0.0012 J	< 0.015	< 0.014	< 0.012	< 0.015	< 0.012
	Pyrene	8270C	0.044	mg/kg dry	0.013 J	0.047	0.01	0.013	0.092	0.54	2.3	0.023	0.017	0.027	0.013	< 0.0029	0.012	0.00072 J	0.001 J	0.00078 J
Volatile Organics	1,1,2,2,-Tetrachloroethane	8260B	1.36	mg/kg dry	< 0.0013	0.00018 J	< 0.0023	< 0.0044	< 0.0033	< 0.0016	< 0.0022	< 0.0016	< 0.0025	< 0.0019	< 0.0030	0.00027 J	< 0.0028	< 0.0021	< 0.0024	< 0.0031
	1,2,3-Trichlorobenzene	8260B	0.86	mg/kg dry	< 0.0025 U	0.00021 U	< 0.0023	< 0.0044</												

TABLE 3-10
Near Shore Surface Water Results

					Sample ID	G-RS1SW-090609	G-RS2SW-090609	G-RS3SW-090609	G-RS4SW-090609	G-RS5SW-090609	G-RS5SW-090609	G-RS6SW-090609	G-RS7SW-090609	G-RS8SW-090609
					Collection									
					Date	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009
Type	Analytes	Method	Screening Level ug/L	Units										
TPH	Diesel Range Organics	NWTPH-Dx	NSA	ug/L	< 250	< 260	< 266	< 248	< 240	---	< 278	< 245	< 240	
	Heavy Oils	NWTPH-Dx	NSA	ug/L	< 500	< 521	< 532	< 495	< 481	---	< 556	< 490	< 481	
PCBs	Aroclor 1016	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
	Aroclor 1221	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
	Aroclor 1232	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
	Aroclor 1242	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
	Aroclor 1248	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
	Aroclor 1254	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
	Aroclor 1260	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	<0.047	---	< 0.050	< 0.049	< 0.048	
Carcinogenic PAH	Benzo(a)anthracene	8270 SIM	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	0.0077 J	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
	Benzo(a)pyrene	8270 SIM	0.0038	ug/L	< 0.019	< 0.02	< 0.019	< 0.02	< 0.022	---	< 0.02	< 0.019	< 0.019	
	Benzo(b)fluoranthene	8270 SIM	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
	Benzo(k)fluoranthene	8270 SIM	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
	Chrysene	8270 SIM	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	0.015	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
	Dibenzo(a,h)anthracene	8270 SIM	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
	Indeno(1,2,3-cd)pyrene	8270 SIM	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
Non-Carcinogenic PAH	Acenaphthene	8270 SIM	670	ug/L	0.0012 J	0.0099 U	0.0094 U	0.044	0.059	---	0.0025 J	0.0095 U	0.0017 J	
	Acenaphthylene	8270 SIM	NSA	ug/L	< 0.0096	< 0.0099	< 0.0094	0.0094 J	0.0071 J	---	< 0.01	0.0015 J	< 0.0095	
	Anthracene	8270 SIM	8300	ug/L	0.0011 J	0.0099 U	0.0094 U	0.021	0.0049 J	---	0.0015 J	0.0095 U	0.0011 J	
	Benzo(g,h,i)perylene	8270 SIM	NSA	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095	
	Fluoranthene	8270 SIM	130	ug/L	0.0020 J	0.0099 U	0.0094 U	0.017	0.0038 J	---	0.0025 J	0.0095 U	0.0022 J	
	Fluorene	8270 SIM	1100	ug/L	0.0026 J	0.0099 U	0.0094 U	0.13	0.097	---	0.0045 J	0.0095 U	0.0026 J	
	Naphthalene	8270 SIM	NSA	ug/L	< 0.0096	< 0.0099	< 0.0094	0.0099 U	0.054	---	< 0.01	< 0.0095	< 0.0095	
	Phenanthrene	8270 SIM	NSA	ug/L	0.0040 J	0.0099 U	0.0094 U	0.21	0.035	---	0.0085 J	0.0095 U	0.0033 J	
	Pyrene	8270 SIM	830	ug/L	< 0.0096	0.0099 U	0.0094 U	0.039	0.0049 J	---	0.0022 J	0.0095 U	0.0023 J	
	1-Methylnaphthalene	8270 SIM	NSA	ug/L	0.0024 J	0.0099 U	0.0094 U	0.11	0.21	---	0.0056 J	0.0095 U	0.0041 J	
	2-Methylnaphthalene	8270 SIM	NSA	ug/L	< 0.012	< 0.013	< 0.012	0.013 U	0.013 J	---	< 0.013	< 0.012	< 0.012	
	Aluminum	6010 / 6020	NSA	ug/L	< 500	< 500	< 500	< 500	< 500	---	< 500	< 500	< 500	
Total Metals	Arsenic	6010 / 6020	50	ug/L	< 2	< 2	< 2	< 2	0.52 J	---	1.1 J	< 2	< 2	
	Antimony	6010 / 6020	5.6	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Barium	6010 / 6020	NSA	ug/L	7.9	8.1	7.2	7.9	13	---	8	7.6	7.2	
	Beryllium	6010 / 6020	NSA	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Calcium	6010 / 6020	NSA	ug/L	12000	12000	11000	11000	15000	---	11000	11000	11000	
	Cadmium	6010 / 6020	0.6	ug/L	<0.14*	<0.14*	<0.14*	<0.14*	<0.14*	---	<0.14*	<0.14*	<0.14*	
	Chromium	6010 / 6020	74	ug/L	0.46 J	< 2	< 2	0.44 J	< 2	---	0.38 J	0.42 J	0.51 J	
	Cobalt	6010 / 6020	NSA	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Copper	6010 / 6020	11	ug/L	0.75 J	0.9 J	0.74 J	0.78 J	0.8 J	---	0.84 J	0.76 J	0.77 J	
	Iron	6010 / 6020	NSA	ug/L	< 200	51 J	< 200	41 J	1700	590	68 J	< 200	< 200	
	Lead	6010 / 6020	2.5	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Magnesium	6010 / 6020	NSA	ug/L	2500	2400	2400	2300	3000	---	2300	2300	2300	
	Manganese	6010 / 6020	NSA	ug/L	< 20	< 20	< 20	11 J	160	130	11 J	7.6 J	1.9 J	
	Mercury	7470A / 7471B	NSA	ug/L	< 0.2	0.12 J	< 0.2	< 0.2	< 0.2	---	0.12 J	< 0.2	< 0.2	
	Nickel	6010 / 6020	52	ug/L	0.53 J	0.52 J	0.46 J	0.38 J	0.58 J	---	0.46 J	0.47 J	0.39 J	
	Potassium	6010 / 6020	NSA	ug/L	660 J	670 J	680 J	660 J	760 J	---	680 J	690 J	680 J	
	Selenium	6010 / 6020	5	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Silver	6010 / 6020	3.4	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Sodium	6010 / 6020	NSA	ug/L	1100 J	1100 J	1000 J	1000 J	1200 J	---	1000 J	1000 J	1000 J	
	Thallium	6010 / 6020	0.24	ug/L	< 4	< 4	< 4	0.14 J	< 4	---	< 4	< 4	< 4	
	Vanadium	6010 / 6020	NSA	ug/L	0.28 J	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	
	Zinc	6010 / 6020	120	ug/L	< 7	< 7	< 7	< 7	< 7	---	< 7	< 7	< 7	

Notes: * Indicates a minimum detection limit.
Shading indicates dissolved metals analysis.
Bold - Detection is above media Screening Levels
NSA - No screening level available.
" < " - The analyte is not detected above the reporting quantitation limit.
U - Analyte not detected above the reported amount as a result of validation rules.
J - The analyte is positively identified. However, the result is an estimated value.
UJ - The analyte was not detected above the reporting quantitation limit. However the reporting limit is approximate.
R - The data is rejected due to a deficiency in quality control criteria.



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MEMORANDUM

DATE: May 11, 2010
TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA
FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington Mw
SUBJ: **Organic Data Quality Assurance Review,
Avery Landing Site, Avery, Idaho**
REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of one soil sample collected from the Avery Landing site located in Avery, Idaho, has been completed. Analysis for Volatile Organic Compounds (VOCs; EPA Method 8260) was performed by Analytical Resources, Inc., Tukwila, Washington.

The sample was numbered; G-RS5SSED-0-090809

Data Qualifications:

1. Sample Holding Times: Acceptable.

The sample was maintained and received within the QC limits of $< 6^{\circ}\text{C}$. The sample was collected on September 8, 2009, and was analyzed on September 16, 2009, therefore meeting QC criteria of less than 14 days between collection and analysis for soil samples.

2. Tuning: Not Reviewed.

Tuning information was not provided.

3. Initial Calibration: Not Provided.

Initial calibration information was not provided. The case narrative indicated that all initial calibration results were acceptable.

4. Continuing Calibration: Not Provided.

Continuing calibration information was not provided. The case narrative indicated that vinyl chloride was outside QC limits and that positive results were qualified "Q".

5. Blanks: Acceptable.

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

6. System Monitoring Compounds (SMCs): Acceptable.

All SMC recoveries were within QC limits.

7. Blank Spike (BS)/BS Duplicate (BSD) Analysis: Acceptable.

BS and BSD analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within QC limits.

8. Duplicate Analysis: Acceptable.

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

9. Internal Standards: Not Provided.

Internal standard information was not provided. The case narrative indicated that the internal standard results were acceptable.

10. Precision and Bias Determination: Not Performed.

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.
- R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.
- U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 2

Sample ID: G-RS5SSED-0-090809

SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Data Release Authorized: *AB*

Reported: 09/22/09

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

Date Sampled: 09/08/09

Date Received: 09/10/09

Instrument/Analyst: FINN5/PAB

Date Analyzed: 09/16/09 18:17

Sample Amount: 3.94 g-dry-wt

Purge Volume: 5.0 mL

Moisture: 29.7%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.3	< 1.3	U
74-83-9	Bromomethane	1.3	< 1.3	U
75-01-4	Vinyl Chloride	1.3	< 1.3	U
75-00-3	Chloroethane	1.3	< 1.3	U
75-09-2	Methylene Chloride	2.5	< 2.5	U
67-64-1	Acetone	6.3	61	
75-15-0	Carbon Disulfide	1.3	< 1.3	U
75-35-4	1,1-Dichloroethene	1.3	< 1.3	U
75-34-3	1,1-Dichloroethane	1.3	< 1.3	U
156-60-5	trans-1,2-Dichloroethene	1.3	< 1.3	U
156-59-2	cis-1,2-Dichloroethene	1.3	< 1.3	U
67-66-3	Chloroform	1.3	< 1.3	U
107-06-2	1,2-Dichloroethane	1.3	< 1.3	U
78-93-3	2-Butanone	6.3	28	
71-55-6	1,1,1-Trichloroethane	1.3	< 1.3	U
56-23-5	Carbon Tetrachloride	1.3	< 1.3	U
108-05-4	Vinyl Acetate	6.3	< 6.3	U
75-27-4	Bromodichloromethane	1.3	< 1.3	U
78-87-5	1,2-Dichloropropane	1.3	< 1.3	U
10061-01-5	cis-1,3-Dichloropropene	1.3	< 1.3	U
79-01-6	Trichloroethene	1.3	< 1.3	U
124-48-1	Dibromochloromethane	1.3	< 1.3	U
79-00-5	1,1,2-Trichloroethane	1.3	< 1.3	U
71-43-2	Benzene	1.3	< 1.3	U
10061-02-6	trans-1,3-Dichloropropene	1.3	< 1.3	U
110-75-8	2-Chloroethylvinylether	6.3	< 6.3	U
75-25-2	Bromoform	1.3	< 1.3	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	6.3	< 6.3	U
591-78-6	2-Hexanone	6.3	< 6.3	U
127-18-4	Tetrachloroethene	1.3	< 1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	1.3	< 1.3	U
108-88-3	Toluene	1.3	< 1.3	U
108-90-7	Chlorobenzene	1.3	< 1.3	U
100-41-4	Ethylbenzene	1.3	< 1.3	U
100-42-5	Styrene	1.3	< 1.3	U
75-69-4	Trichlorofluoromethane	1.3	< 1.3	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	< 2.5	U
179601-23-1	m,p-Xylene	1.3	< 1.3	U
95-47-6	o-Xylene	1.3	< 1.3	U
95-50-1	1,2-Dichlorobenzene	1.3	< 1.3	U
541-73-1	1,3-Dichlorobenzene	1.3	< 1.3	U
106-46-7	1,4-Dichlorobenzene	1.3	< 1.3	U
107-02-8	Acrolein	63	< 63	U
74-88-4	Methyl Iodide	1.3	< 1.3	U
74-96-4	Bromoethane	2.5	< 2.5	U
107-13-1	Acrylonitrile	6.3	< 6.3	U

PNW 5-11-10

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 2 of 2

Sample ID: G-RS5SSED-0-090809

SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Date Analyzed: 09/16/09 18:17

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

CAS Number	Analyte	RI	Result	Q
563-58-6	1,1-Dichloropropene	1.3	< 1.3	U
74-95-3	Dibromomethane	1.3	< 1.3	U
630-20-6	1,1,1,2-Tetrachloroethane	1.3	< 1.3	U
96-12-8	1,2-Dibromo-3-chloropropane	6.3	< 6.3	U
96-18-4	1,2,3-Trichloropropane	2.5	< 2.5	U
110-57-6	trans-1,4-Dichloro-2-butene	6.3	< 6.3	U
108-67-8	1,3,5-Trimethylbenzene	1.3	< 1.3	U
95-63-6	1,2,4-Trimethylbenzene	1.3	< 1.3	U
87-68-3	Hexachlorobutadiene	6.3	< 6.3	U
106-93-4	Ethylene Dibromide	1.3	< 1.3	U
74-97-5	Bromochloromethane	1.3	< 1.3	U
594-20-7	2,2-Dichloropropane	1.3	< 1.3	U
142-28-9	1,3-Dichloropropane	1.3	< 1.3	U
98-82-8	Isopropylbenzene	1.3	< 1.3	U
103-65-1	n-Propylbenzene	1.3	< 1.3	U
108-86-1	Bromobenzene	1.3	< 1.3	U
95-49-8	2-Chlorotoluene	1.3	< 1.3	U
106-43-4	4-Chlorotoluene	1.3	< 1.3	U
98-06-6	tert-Butylbenzene	1.3	< 1.3	U
135-98-8	sec-Butylbenzene	1.3	< 1.3	U
99-87-6	4-Isopropyltoluene	1.3	< 1.3	U
104-51-8	n-Butylbenzene	1.3	< 1.3	U
120-82-1	1,2,4-Trichlorobenzene	6.3	< 6.3	U
91-20-3	Naphthalene	6.3	< 6.3	U
87-61-6	1,2,3-Trichlorobenzene	6.3	< 6.3	U

Reported in $\mu\text{g/kg}$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	106%
Bromofluorobenzene	98.5%
d4-1,2-Dichlorobenzene	101%

MN
5-11-10



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MEMORANDUM

DATE: May 11, 2010
TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA
FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*
SUBJ: **Organic Data Quality Assurance Review,
Avery Landing Site, Avery, Idaho**
REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of one soil sample collected from the Avery Landing site located in Avery, Idaho, has been completed. Analysis for Semivolatile Organic Compounds (SVOCs; EPA Method 8270 and 8270-SIM) was performed by Analytical Resources, Inc., Tukwila, Washington.

The sample was numbered: G-RS5SSED-0-090809

Data Qualifications:

1. Sample Holding Times: Acceptable.

The sample was maintained and received within the QC limits of $< 6^{\circ}\text{C}$. The sample was collected on September 8, 2009, was extracted on September 14, 2009, and was analyzed by September 17, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. Tuning: Not Provided.

Tuning information was not provided.

3. Initial Calibration: Not Provided.

Initial calibration information was not provided. The case narrative indicated that 2,4-dinitrophenol was outside QC limits and positive results were qualified "Q".

4. Continuing Calibration: Not Provided.

Continuing calibration information was not provided. The case narrative indicated that hexachlorocyclopentadiene results were below QC limits and positive results were qualified.

5. Blanks: Acceptable.

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

6. System Monitoring Compounds (SMCs): Acceptable.

All SMC recoveries were within QC limits.

7. Matrix Spike (MS)/MS Duplicate (MSD)/Blank Spike (BS)/BS Duplicate Analysis: Acceptable.

The case narrative indicated that several MS and MSD results were outside QC limits, but there was no indication which analytes were outside of the limits. No qualifications were applied based on the unknown MS and/or MSD outliers. The case narrative also indicated that several BS and/or BSD recoveries were above QC limits; however, since there were no associated positive results, no qualifications were applied.

8. Duplicate Analysis: Acceptable.

Spike duplicate results were provided and there was no indication of outliers, therefore no qualifications were applied.

9. Internal Standards: Not Provided.

Internal standard information was not provided. The case narrative indicated that internal standard results were acceptable.

10. Precision and Bias Determination: Not Performed.

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.
- R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.
- U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 2Sample ID: G-RS5SSED-0-090809
SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Data Release Authorized:

Reported: 09/18/09

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

Date Sampled: 09/08/09

Date Received: 09/10/09

Date Extracted: 09/14/09

Date Analyzed: 09/15/09 12:39

Instrument/Analyst: NT6/JZ

GPC Cleanup: No

Sample Amount: 8.28 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 25.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
111-44-4	Bis-(2-Chloroethyl) Ether	60	< 60 U
95-57-8	2-Chlorophenol	60	< 60 U
541-73-1	1,3-Dichlorobenzene	60	< 60 U
106-46-7	1,4-Dichlorobenzene	60	< 60 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	60	< 60 U
98-95-3	Nitrobenzene	60	< 60 U
78-59-1	Isophorone	60	< 60 U
88-75-5	2-Nitrophenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
65-85-0	Benzoic Acid	600	< 600 U
111-91-1	bis(2-Chloroethoxy) Methane	60	< 60 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	60	< 60 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	60	< 60 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	60	< 60 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	60	< 60 U
51-28-5	2,4-Dinitrophenol	600	< 600 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	60	< 60 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	60	< 60 U
7005-72-3	4-Chlorophenyl-phenylether	60	< 60 U
86-73-7	Fluorene	60	< 60 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	600	< 600 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 2 of 2Sample ID: G-RS5SSED-0-090809
SAMPLELab Sample ID: PN69A
LIMS ID: 09-21001
Matrix: Soil
Date Analyzed: 09/15/09 12:39QC Report No: PN69-Golder Associates
Project: Avery Landing
073-93312-03

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	60	< 60 U
101-55-3	4-Bromophenyl-phenylether	60	< 60 U
118-74-1	Hexachlorobenzene	60	< 60 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
205-99-2	Benzo(b)fluoranthene	60	< 60 U
207-08-9	Benzo(k)fluoranthene	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	81.2%
d14-p-Terphenyl	78.4%	d4-1,2-Dichlorobenzene	73.2%
d5-Phenol	64.5%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	82.9%	d4-2-Chlorophenol	63.7%

5-11-10

ORGANICS ANALYSIS DATA SHEET
PNAs by SIM SW8270D-SIM GC/MS
Page 1 of 1Sample ID: G-RS5SSED-0-090809
SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Data Release Authorized: *B*

Reported: 09/22/09

QC Report No: PN69-Golder Associates

Project: Avery Landing

Event: 073-93312-03

Date Sampled: 09/08/09

Date Received: 09/10/09

Date Extracted: 09/14/09

Date Analyzed: 09/17/09 13:50

Instrument/Analyst: NT8/YZ

GPC Cleanup: No

Silica Gel Cleanup: Yes

Alumina Cleanup: No

Sample Amount: 10.8 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 25.1%

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	4.6	< 4.6 U
91-57-6	2-Methylnaphthalene	4.6	6.0
90-12-0	1-Methylnaphthalene	4.6	< 4.6 U
208-96-8	Acenaphthylene	4.6	< 4.6 U
83-32-9	Acenaphthene	4.6	< 4.6 U
86-73-7	Fluorene	4.6	5.1
85-01-8	Phenanthrene	4.6	8.3
120-12-7	Anthracene	4.6	< 4.6 U
206-44-0	Fluoranthene	4.6	7.9
129-00-0	Pyrene	4.6	59
56-55-3	Benzo(a)anthracene	4.6	< 4.6 U
218-01-9	Chrysene	4.6	28
205-99-2	Benzo(b)fluoranthene	4.6	8.3
207-08-9	Benzo(k)fluoranthene	4.6	8.3
50-32-8	Benzo(a)pyrene	4.6	18
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	6.5
53-70-3	Dibenz(a,h)anthracene	4.6	< 4.6 U
191-24-2	Benzo(g,h,i)perylene	4.6	17
132-64-9	Dibenzofuran	4.6	< 4.6 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 67.7%

d14-Dibenzo(a,h)anthracene 85.0%

MW 5-11-10



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720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9831

MEMORANDUM

DATE: May 11, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review,
Avery Landing Site, Avery, Idaho**

REF: TDD: 08-05-0006

PAN: 002233.0344.01RA

The data quality assurance review of one soil sample collected from the Avery Landing site located in Avery, Idaho, has been completed. Analysis for Polychlorinated Biphenyls (PCBs; EPA Method 8082) was performed by Analytical Resources, Inc., Tukwila, Washington. The sample was numbered: G-RS5SSED-0-090809.

Data Qualifications:

1. Sample Holding Times: Acceptable.

The sample was maintained and received within the QC limits of < 6°C. The sample was collected on September 8, 2009, was extracted on September 14, 2009, and was analyzed by September 16, 2009, therefore meeting QC criteria of less than 14 days between collection and sample extraction and less than 40 days between extraction and analysis.

2. Instrument Performance: Not Provided.

Instrument performance information was not provided.

3. Initial and Continuing Calibration: Not Provided.

Calibration information was not provided. The case narrative indicated that all calibration results were acceptable.

4. Error Determination: Not Provided.

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. Blanks: Acceptable.

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

6. Performance Evaluation Samples: Not Provided.

Performance evaluation samples were not provided to the laboratory.

7. System Monitoring Compounds (SMCs): Acceptable.

All recoveries of the SMCs were within the established control limits.

8. Blank and Matrix Spikes: Acceptable.

Recoveries of all spiked analytes were within the appropriate control limits.

9. Duplicates: Acceptable.

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

10. Compound Identification: Not Provided.

Compound identification information was not provided.

11. Target Compound Quantitation and Quantitation Limits: Not Provided.

Quantitation and quantitation limit calculation information was not provided.

12. Laboratory Contact

No laboratory contact was required.

13. Overall Assessment

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- | | |
|------|--|
| J - | The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met. |
| JN - | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. |
| N - | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification". |
| R - | The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification. |
| U - | The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit. |
| UJ - | The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met. |

ORGANICS ANALYSIS DATA SHEET

PCB by GC/ECD Method SW8082

Page 1 of 1


Sample ID: G-RS5SSED-0-090809

SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Data Release Authorized: 

Reported: 09/17/09

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

Date Sampled: 09/08/09

Date Received: 09/10/09

Date Extracted: 09/14/09

Date Analyzed: 09/16/09 21:28

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Acid Cleanup: Yes

Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt

Final Extract Volume: 4.0 mL

Dilution Factor: 1.00

Silica Gel: No


Percent Moisture: 25.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	31	< 31 U
53469-21-9	Aroclor 1242	31	< 31 U
12672-29-6	Aroclor 1248	31	< 31 U
11097-69-1	Aroclor 1254	31	< 31 U
11096-82-5	Aroclor 1260	31	< 31 U
11104-28-2	Aroclor 1221	31	< 31 U
11141-16-5	Aroclor 1232	31	< 31 U

Reported in $\mu\text{g/kg}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	82.8%
Tetrachlorometaxylene	75.8%





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720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 11, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Organic Data Quality Assurance Review,
Avery Landing Site, Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of one soil sample collected from the Avery Landing site located in Avery, Idaho, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by Analytical Resources, Inc., Tukwila, Washington.

The sample was numbered: G-RS5SSED-0-090809

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The sample was maintained and received within the QC limits of < 6°C. The sample was collected on September 8, 2009, extracted on September 14, 2009, and analyzed on September 15, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction for soil samples, and less than 40 days between extraction and analysis.

2. **Initial Calibration: Not Provided.**

Initial calibration information was not provided. The case narrative indicated that all initial calibration results were acceptable.

3. **Continuing Calibration: Not Provided.**

Continuing calibration information was not provided. The case narrative indicated that all initial calibration results were acceptable.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. Blanks: Acceptable.

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. System Monitoring Compounds (SMC): Acceptable.

All recoveries of the SMCs were greater than 10% and within QC criteria.

7. Performance Evaluation Samples: Not Provided.

Performance evaluation samples were not provided to the laboratory.

8. Matrix and Blank Spikes: Acceptable.

Matrix and blank spike results were within QC limits except the case narrative indicated that the diesel matrix spike duplicate result was outside QC limits; no action was taken based on this.

9. Duplicates: Acceptable.

Duplicate results were acceptable.

10. Quantitation and Quantitation Limits: Acceptable.

Sample concentrations were correctly calculated.

11. Laboratory Contact: Not Required.

No laboratory contact was required.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Matrix: Soil

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

Data Release Authorized: *VTS*
Reported: 09/17/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB 091409	Method Blank	09/14/09	09/15/09	1.00	Diesel	5.0	< 5.0 U
09-21001	HC ID: ---		FID3A	1.0	Motor Oil	10	< 10 U
					o-Terphenyl		97.7% <i>mw</i>
PN69A	G-RS5SSED-0-090809	09/14/09	09/15/09	1.00	Diesel	6.7	63
09-21001	HC ID: DIESEL/MOTOR OIL		FID3A	1.0	Motor Oil	13	79
					o-Terphenyl		85.2%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.

Motor Oil quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

FORM I

PN 5-11-10

PN69: 00058



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720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 11, 2010
TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA
FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*
SUBJ: **Inorganic Data Quality Assurance Review,
Avery Landing Site, Avery, Idaho**
REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of one soil sample collected from the Avery Landing site located in Avery, Idaho, has been completed. Analysis for Target Analyte List (TAL) metals (EPA 6000 and 7000 series methods) was performed by Analytical Resources, Inc., Tukwila, Washington.

The sample was numbered: G-RS5SSED-0-090809

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The sample was maintained and received within the QC limits of $< 6^{\circ}\text{C}$. The sample was collected on September 8, 2009, and was analyzed by September 18, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Not Provided.**

Calibration information was not provided. The case narrative indicated that all calibration results were acceptable.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. There were no detections in any blanks.

4. **ICP-Interference Check Sample: Not Provided.**

Interference Check Sample (ICS) information was not provided.

5. **Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

6. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

7. ICP Serial Dilution: Not Provided.

Serial dilution information was not provided.

8. Matrix Spike Analysis: Not Provided.

Matrix spike information was not provided.

9. Duplicate Analysis: Not Provided.

Laboratory duplicate analysis information was not provided.

10. Laboratory Control Sample Analysis: Acceptable.

A Laboratory Control Sample (LCS) was analyzed per SDG per matrix. All LCS results were within the established control limits.

11. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.
 - R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.
 - U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
 - UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.
-

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: G-RS5SSED-0-090809

SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 09/22/09

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

Date Sampled: 09/08/09

Date Received: 09/10/09

Percent Total Solids: 70.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/11/09	6010B	09/18/09	7429-90-5	Aluminum	7	9,840	
3050B	09/11/09	200.8	09/14/09	7440-36-0	Antimony	0.3	0.3	U
3050B	09/11/09	200.8	09/14/09	7440-38-2	Arsenic	0.3	9.6	
3050B	09/11/09	6010B	09/18/09	7440-39-3	Barium	0.4	44.7	
3050B	09/11/09	6010B	09/18/09	7440-41-7	Beryllium	0.1	0.3	
3050B	09/11/09	6010B	09/18/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	09/11/09	6010B	09/18/09	7440-70-2	Calcium	7	1,690	
3050B	09/11/09	6010B	09/18/09	7440-47-3	Chromium	0.7	8.9	
3050B	09/11/09	6010B	09/18/09	7440-48-4	Cobalt	0.4	6.7	
3050B	09/11/09	6010B	09/18/09	7440-50-8	Copper	0.3	20.4	
3050B	09/11/09	6010B	09/18/09	7439-89-6	Iron	7	18,300	
3050B	09/11/09	6010B	09/18/09	7439-92-1	Lead	3	12	
3050B	09/11/09	6010B	09/18/09	7439-95-4	Magnesium	7	5,480	
3050B	09/11/09	6010B	09/18/09	7439-96-5	Manganese	0.1	178	
CLP	09/11/09	7471A	09/12/09	7439-97-6	Mercury	0.03	0.03	U
3050B	09/11/09	6010B	09/18/09	7440-02-0	Nickel	1	12	
3050B	09/11/09	6010B	09/18/09	7440-09-7	Potassium	70	1,710	
3050B	09/11/09	200.8	09/14/09	7782-49-2	Selenium	0.7	0.7	U
3050B	09/11/09	7761	09/18/09	7440-22-4	Silver	0.03	0.03	U
3050B	09/11/09	6010B	09/18/09	7440-23-5	Sodium	70	80	
3050B	09/11/09	200.8	09/14/09	7440-28-0	Thallium	0.3	0.3	U
3050B	09/11/09	6010B	09/18/09	7440-62-2	Vanadium	0.4	18.9	
3050B	09/11/09	6010B	09/18/09	7440-66-6	Zinc	1	37	

U-Analyte undetected at given RL

RL-Reporting Limit

[Handwritten Signature]
5-11-10



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MEMORANDUM

DATE: May 12, 2010

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site,
Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of two samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed as listed in the Tier III and IV Data Validation Summary Checklist (attached). Target analyte list (TAL) metals (EPA Methods 200.8, 6010B, 7471A, and 7761) and semivolatile organic compounds (SVOCs; EPA Method 8270-SIM) analyses were performed by Analytical Resources, Inc., Tukwila, Washington.

The samples were numbered: G-GA3S-090309 G-RS5SSED-0-090809

See the attached Checklists and associated data results pages provided by Golder Associates.

ORGANIC ANALYTE - Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Analytical Resources, Inc.		SDG: PN-10, PN-14, PN-53 & PN-54	
SAMPLES	Collect:	MATRIX	
# G-GA-35-090309 (PN-10)	090309	Water	
# G-RS-3SSW-090609 (PN-53)	090609	Water	
* G-RS-5SSED-0-090809 (PN-53)	090809	Soil	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA	BNA	Pest / PCB	Chlor / Herb.	TPH Diesel-x NUTPH	OTHER * Total Solids	OTHER PAH Sim
1. Data Completeness	8260	8270	8082				
2. Holding Times							
3. Field Blanks CALIBRATION							
4. Laboratory Blanks							
5. Surrogates							
6. Lab Duplicate, Field Duplicate							
7. LCS, Blank Spike (2)							
8. Matrix Spike /MS Duplicate							
9. Result Verify, Detection Limits (3)							
10. Overall Summary							

O = Data had no problems

Θ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Calib. data assoc. w/ G-GA-35 out of limit for Benzo(ghi) Assoc. result Qualif. (UJ).
② RPD of LRS/LCS out of limit; Naphthalene & 2Meth Naph. qualif. (J) for Sample G-GA-35. QUALIF. REPORT PAGE ATTACHED.

③ VOA compds 123 Trichloro Propane 12 Dibromo 3 Chloro Propane Ethyldi Brom do not meet needs of Regulatory Screen criteria - NO QUALIF.

③ SVOA compds Dibenz(a,h) & B(a)P do not meet needs of Regulat. Screen criteria - NO QUALIF Applied.

Validated by:

Reviewed by:

Date: Nov. 6, 2009

Date:

ORGANIC ANALYTE - Tier I & II Data Validation Summary Checklist

Acceptable:

YES ☒ NO ☐

1. Date Package Completeness (Check if present).....

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ Detection Limits
- ☒ GC/MS Tuning
- ☒ Initial Calibration
- ☒ Continuing Calib.

- ☒ Blank Results
- ☒ Surrogate Results
- ☒ Internal Standards
- ☒ MS/MSD, LCS Results
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ Raw Data
- ☐ Other

- ☒ Acceptable
- ☒ Absent
- ☐ Not required for data package requested.

Comments/Qualified Results:

CALIB. WATERS: CCAL for Benzo (gh) 8D1-G-GA-35
 (X) result qualif. (J).

SOIL: Calib limits ~~8000~~ For V. Chloride & Bromoform below (25%)
D.U. 2 Diff max- NO QUALIF Applied for VOA = SVOA, SVOC-Sim
PCB, TPH.

2. Holding Times (Check all that apply).....

Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection

- ☒ BNA samples extracted within 7 days (14 day soil) of collection
- ☒ BNA extracts analyzed within 40 days of collection
- ☒ Pest/PCBs samples extracted within 7 days (14 day soil) of collection
- ☒ Pest/PCBs extracts analyzed within 40 days of collection

TPH Diesel ext < 7 days
+ G-RS5-SSSED (SOIL)

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results:

* Sample G-GA-35, # Sample G-RS-35SW:

	Collect	Prep	Analysis	DAYS
BNA (8230)	* 9/03 # 9/06	* 9/07 # 9/10	* 9/09 # 9/15	4, 4 ✓ (<7)
PCB (8082)	↓	9/08 9/11	9/11 9/14	5, 8 ✓ (<7)
NWTPH-Dx	↓	9/07 9/10	9/07 9/11	4, 1 ✓ (<7)
+ VOC (8260)	9/08	9/16	9/16	8 Days ✓ (<14)
+ SVOC (8270)	↓	9/14	9/15	6, 7 ✓ (<7)
+ SVOA-SIM	↓	9/14	9/17	6, 9 ✓ (<7)
+ TPH-Dx	↓	9/14	9/15	6, 7 ✓ (<7)

3. Field Blanks, Storage Blanks (VOA only) (Check all that apply).....

- ☐ Storage Blanks; prepared upon receipt of sample set.
- ☐ Storage Blanks; Target Cmpnds <RL.
- ☐ MeCl2 & cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs)
- ☐ All blanks; Non-Target Cmpnds must be < 2.0 ug/L
- ☐ Field Blanks; Qualification is advisory, but should be called out in Report Text.

FIELD BLANK ID:

Examples:

Comments/Qualified Results: Field Blanks not available for this SDG.

ORGANIC ANALYTE - Tier I & II Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☐

4. Laboratory Blanks (Check all that apply).....

- ☒ Method Blanks, Prep. Blanks analyzed after Cal Stnds and every 12 hours
- ☒ Method Blanks; Target Cmpnds <RL, MeCl2 & cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart other Contaminants: Qualif. Results <5X RLs according to Chart below
- ☒ Instrument blanks after all high level samples, All cmpnds must be <RL
- ☒ All blanks; Non-Target Cmpnds must be < 2.0 ug/L

Examples:

Comments/Qualified Results:

BNA: MB-090709 ✓

VOC: MB-091009 ✓

* VOA: MB091609 ✓ Assoc G-RS55SED

SVOA: MB091409 ✓ " " " " " "

SVOA-SIM " ✓ OK.

PCB: MB091409 ✓

TPH-Dx: " ✓

BLANK			SAMPLE		Q
MDL	Result	PQL	Result	Applied	
0.3	0.45	1.0	0.8	1.0 U	
0.3	0.99	1.0	1.8	1.8 J	
0.3	1.5	1.0	1.1	1.5 U	
0.3	1.5	1.0	1.8	1.8 J	
0.3	0	1.0	0.85	0.85 J	
0.3	0	1.0	1.8	1.8	

PAH-SIM 090709 ✓

PCB-090809, 091109 ✓

TPH-090709, 091009 ✓

5. Surrogates (Check all that apply).....

- ☒ Surrogates analyzed
- ☒ Recoveries within Method Control (lab) limits (VOA: 80 - 120%, SVOA: Lab Established, PEST: 30-150%)
- ☒ Recoveries above Method Control limits (J-detects only) TPH 50-150%
- ☒ Recoveries below Method Control limits but >20% (J/UJ)
- ☒ Recoveries below 20%, 10% for PEST (J/UR for VOA, J/ UJ or UR for SVOA, J/UR for PEST)

Comments/Qualified Results

G-GA-3S : BNA, PCB, TPH-D, 89% ✓

G-RS-3SSW : BNA, PCB, TPH-D, 92.5% ✓

* G-RS55SED : VOA, SVOA, SVOA-SIM, PCB, TPH ✓

6. Duplicate, Field Duplicates (Check all that apply).....

- ☐ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
- ☐ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
- ☐ Field duplicate RPD ≤20% (≤35% for soils)

Parent ID:

Duplicate ID:

Comments/Qualified Results

F. Duplicates not avail. for this SDG.

ORGANIC ANALYTE - Tier I & II Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☐

7. Lab Control Samples, Blank Spikes (Check all that apply)..... ☒ ☒

- (1) LCS %R 80-120% [Provided: LCS, LCSD, BS, BSD ?] (1) G-RS5SSED*
 LCS %R 50-79% or >120%, results >IDL estimated (J) (2) G-GA35, G-RS5SSW#
 LCS %R 50-79% and results <IDL estimated (UJ)
 LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: (1) LCS/LCSD ART(5/01/09) Acceptance

* Limits met for: VOA(8260) ✓, SVOA(8270) ✓, SVOC-PAH ✓, TPH-D_x ✓
 ↓ PCB ✓, (2) Naphthal. + 1M-Naph. RPD out. Assoc. w # G-GA-35 is #
 ⊗ Qualif. (J). PCB 090809 ✓, 091109 ✓, TPH 090709 ✓, 091109 ✓

8. MS / MSD Recovery on samples for associated Data Package... ☒ ☐

MS/MSD Recovery data is not specified in Functional Guidelines, however the following limits will be advisory.

- 1 MS/MSD %R 80-120% SPIKED SAMPLE IDS: G-RS5SSED*
 MS/MSD %R 50-79% or >120%, results >IDL estimated (J)
 MS/MSD %R 50-79% and results <IDL estimated (UJ)
 MS/MSD %R <50% and all results rejected (R/UR)

Comments/Qualified Results: 1 - Acceptance Limit Criteria published

* by lab is effective 5-01-09; ∴ Lab established criteria
 is met for SVOA(8270), SVOC(8270 Sim), PCB(8082) ✓
 ms/msd - Not required for NWTPH - NO QUAL.
 " / " - Not provided for VOA(8260) analys. - No Qualif.
 ↓ applied.

9. Result Verification, Detection Limits ☐ ☒

⊗ Do Not meet QAPP SOIL Screen Level criteria

All results supported in raw data; [Raw data provided / Not Provided]

Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: VOA(8260) - 1,2-Dibromo3-chloro P, Ethylene Dibromide

⊗ SVOA(8270) - Diben(a,h) and B(a)P do not meet QAPP.
 PCB(8082) - OK ✓, SVOC(Sim) PAHs - OK ✓, TPH-D_x - OK ✓

10. Overall Assessment..... ☐ ☐

Comments/Qualified Results:

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: G-GA3S-090309

SAMPLE

Lab Sample ID: PN10A

LIMS ID: 09-20720

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 09/10/09

QC Report No: PN10-Golder Associates

Project: Avery Landing

Event: 073-93312

Date Sampled: 09/03/09

Date Received: 09/04/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 21:02

Instrument/Analyst: NT2/PK

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.010	0.045
91-57-6	2-Methylnaphthalene	0.010	0.015
90-12-0	1-Methylnaphthalene	0.010	0.018
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	Acenaphthene	0.010	0.016
86-73-7	Fluorene	0.010	< 0.010 U
85-01-8	Phenanthrene	0.010	< 0.010 U
120-12-7	Anthracene	0.010	< 0.010 U
206-44-0	Fluoranthene	0.010	< 0.010 U
129-00-0	Pyrene	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 61.3%

d14-Dibenzo(a,h)anthracene 82.0%

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05	SITE: Avery Landing/ POTLATCH / Idaho
LABORATORY: Analytical Resources, Inc.	SDG: PN-10, PN-14, PN-53 & PN-54
SAMPLES	MATRIX
	Collect:
G-GA-35-090309 (PN-10) #	090309 Water
G-RS-3SSW-090609 (PN-53) #	090609 Water
G-RS-5SSED-0-090809 (PN-53) +	090809 Soil
# Thoroughant document checklist designates water.	
+ " " " " " "	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES	ICP/ MS	Hg/ Se	CN	Anions	OTHER
	EPA-6010	200-8	7470A			
1. Data Completeness	0	0	0			
2. Holding Times	0	0	0			
3. Calibration	0	0	0			
4. Blanks	0	0	0			
5. Lab Duplicate, Field Duplicate RPD	0	0	0			
6. LCS, Blank Spike, MFS	0	0	0			
7. Matrix Spike, MSD	0	0	0			
8. GFAA, MSA, <u>Serial Dil.</u> ③	0	0	0			
9. Detection Limits, Other QC ① ②	0	0	0			
10. Data Verification, Overall Summary	0	0	0			

0 = Data had no problems

Θ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (I/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① As report limit was above regulatory screen criteria. However sample results above the reg. screen criteria and NO QUALIF. APPLIED.
② Hg does not meet Reg. Screen Limit - NO QUALIF. Applied.
③ Ni serial Dilution exceeds 10%. Assoc. Soil result Qualif. (J).

Validated by:

Reviewed by:

Date: Nov. 3, 2009

Date:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable:

YES NO

1. Date Package Completeness (Check if present).....



- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ ICV/CCV Results
- ☒ Blank Results
- ☒ ICP Interference Check Results
- ☒ Spike Recovery Results
- ☒ Duplicate Results
- ☒ LCS Results
- ☒ Standard Addition Results
- ☒ ICP Serial Dilution

ICS/AB*

- ☒ Instrument Det. Limits
- ☒ ICP Correction Factors
- ☒ ICP Linear Ranges
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ ICP Raw Data
- ☒ GFAA Raw Data
- ☒ Hg Raw Data
- ☒ Cyanide Raw Data
- ☒ Other

- ☐ Acceptable
- ☒ Absent
- ☐ Not required for data package requested.

Comments/Qualified Results: *Run # IP091821 & MS091482

2. Holding Times (Check all that apply).....



- ☒ ICP/GFAA metals completed in <6 months from collection
- ☒ Mercury analyzed in <28 days from collection
- ☒ Cyanide completed in 14 days from collection

- Water Samples
+ - Soil Sample.

Comments/Qualified Results: Cooler temps PN10, PN53

- # G-GASS prep 9-4-09 Analys. 6010: 9/18 200.8: 9/10 Hg: 9/08
- # G-RS-3SS " 9-11-09 " " ; 9/18 " ; 9/14 Hg 9/08
- + G-RS5S-SED prep. 9-11-09 " " ; 9/18 200.8; 9/14 Hg 9/12

3. Calibrations (Check all that apply).....



- ☒ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
- ☒ ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- ☒ ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- ☒ ICV/CCV %R 80-120% for Hg, results accepted
- ☒ CRDL Check Std %R 70 - 130, (50-150 SbPbTi)

- ☒ ICV/CCV %R for Hg, 85%-79% or 121%-135%, results estimated (J/UJ)
- ☒ ICV/CCV %R 85-115% for Cyanide, results acceptable
- ☒ ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- ☒ ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: # PN10: ICAL, CCAL for 6010 & Hg.

ICP interelement corr. factors 9-11-2009. Lin Range date 9/26/09

- # PN53: ICAL, CCAL for 6010. CRDL: Lin Range date 2/3/09
- + PN69A:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES ☒ NO ☐

4. Blanks (Check all that apply)..... ☒ ☐

PN10 WATER Matrix
 # PN53 " "
 Detects reported in ICB/CCB list: No Field Blank submitted.
 Detects in preparation blanks, list: + PN69 SOIL Matrix
 Detects in field blanks, list:

Qualified as undetected (U) all sample concentrations $\leq 10X$ any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: # PN-10 ✓ # PN-53 ✓; No detects; 6010, Hg.

ICB ✓ All ND.
 CCB ✓ 1-4 All ND. PN-14 Hg: ✓ ND
 PN-54 Hg: ✓ ND

+ PN-69A - All ND (Soil)

5. Duplicates (Check all that apply)..... ☒ ☐

✓ Duplicate RPD $\leq 20\%$ for waters ($\leq 35\%$ for soils) for results $> 5X$ CRDL
 Duplicate range is within $\pm CRDL$ ($\pm 2X$ CRDL for soils) for results $< 5X$ CRDL
 Field Duplicate ID

Comments/Qualified Results PN-10 ✓; PN-53 ✓

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... ☒ ☐

✓ LCS %R 80-120%, [50-150% for Ag, Sb] #
 LCS %R 50-79% or $> 120\%$, results $> IDL$ estimated (J)
 LCS %R 50-79% and results $< IDL$ estimated (UJ)
 LCS %R $< 50\%$ and all results rejected (R/UR)

Comments/Qualified Results: # PN-10 ✓; 6010 # Hg (7470A) (✓) = PN-14

PN-53 ✓ Hg: PN-54 ✓

+ PN-69A ✓ (Soil sample associated)

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

8. Spike Recovery (Check all that apply)..... ☒ ☐

- ☒ Spike %R with 75-125%
☐ Spike %R 30-74%, >125%, results > IDL est. (J)
☐ Spike %R 30-74% results <IDL estimated (UJ)

- ☐ Spike %R <30%, results <IDL rejected (UR)
☐ Field blanks used for spike analysis
☐ Post digest spk reqd: %R 75-125%, except Ag

Comments/Qualified Results: PN-10; 6010 # 7470A on Sample:
G-RS358W; G-GA3S

9. GFAA Performance, MSA, or Serial Dilutions..... ☒ ☒

- ☐ Duplicate injection RSD <20%
☐ Duplicate injection RSD >20%, results > CRDL estimated (J)
☐ Analytical spike %R 85-115%
☐ Analytical spike %R 40-85%, results > IDL estimated (J)
☐ Analytical spike %R 10-40%, results <IDL estimated (UJ)
☐ Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results: Serial Dil on G-GA3S 2 Diff. PN-10;
Serial Dil on G-RS358W 2 Diff. PN-53
+ Serial Dil on G-RS358W SED: Not out of limit. Qual. f. (J).

10. Detection Limits, Other QC..... ☐ ☒

Comments/Qualified Results: PN10; As regulat. screen level @ 0.045 ug/L
lab reports 0.2 ug/L

PN-69A; Hg reg. limit @ 0.0051 mg/kg, 0.020 reported RL.

11. Data Verification and Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: G-RS5SED-0-090809

SAMPLE

Lab Sample ID: PN69A

LIMS ID: 09-21001

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 09/22/09

QC Report No: PN69-Golder Associates

Project: Avery Landing

073-93312-03

Date Sampled: 09/08/09

Date Received: 09/10/09

Percent Total Solids: 70.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/11/09	6010B	09/18/09	7429-90-5	Aluminum	7	9,840	
3050B	09/11/09	200.8	09/14/09	7440-36-0	Antimony	0.3	0.3	U
3050B	09/11/09	200.8	09/14/09	7440-38-2	Arsenic	0.3	9.6	
3050B	09/11/09	6010B	09/18/09	7440-39-3	Barium	0.4	44.7	
3050B	09/11/09	6010B	09/18/09	7440-41-7	Beryllium	0.1	0.3	
3050B	09/11/09	6010B	09/18/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	09/11/09	6010B	09/18/09	7440-70-2	Calcium	7	1,690	
3050B	09/11/09	6010B	09/18/09	7440-47-3	Chromium	0.7	8.9	
3050B	09/11/09	6010B	09/18/09	7440-48-4	Cobalt	0.4	6.7	
3050B	09/11/09	6010B	09/18/09	7440-50-8	Copper	0.3	20.4	
3050B	09/11/09	6010B	09/18/09	7439-89-6	Iron	7	18,300	
3050B	09/11/09	6010B	09/18/09	7439-92-1	Lead	3	12	
3050B	09/11/09	6010B	09/18/09	7439-95-4	Magnesium	7	5,480	
3050B	09/11/09	6010B	09/18/09	7439-96-5	Manganese	0.1	178	
CLP	09/11/09	7471A	09/12/09	7439-97-6	Mercury	0.03	0.03	U
3050B	09/11/09	6010B	09/18/09	7440-02-0	Nickel	1	12	J
3050B	09/11/09	6010B	09/18/09	7440-09-7	Potassium	70	1,710	
3050B	09/11/09	200.8	09/14/09	7782-49-2	Selenium	0.7	0.7	U
3050B	09/11/09	7761	09/18/09	7440-22-4	Silver	0.03	0.03	U
3050B	09/11/09	6010B	09/18/09	7440-23-5	Sodium	70	80	
3050B	09/11/09	200.8	09/14/09	7440-28-0	Thallium	0.3	0.3	U
3050B	09/11/09	6010B	09/18/09	7440-62-2	Vanadium	0.4	18.9	
3050B	09/11/09	6010B	09/18/09	7440-66-6	Zinc	1	37	

U-Analyte undetected at given RL

RL-Reporting Limit

[Signature] 11-05-09



ecology and environment, inc.

International Specialists in the Environment

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MEMORANDUM

DATE: May 12, 2010

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site, Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of 15 samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed as listed in the Tier III and IV Data Validation Summary Checklist (attached). Polychlorinated biphenyl (PCB; EPA Method 8082), diesel-range total petroleum hydrocarbons (Method NWTPH-Dx), and semivolatile organic compounds (SVOCs; EPA Method 8270-SIM) analyses were performed by Test America, Spokane Valley, Washington.

The samples were numbered:

G-BH1-Surf-082809	G-BH1-7.5-082809	G-BH1-16-082809
G-BH2-Surf-082809	G-BH2-7.5-082809	G-BH2-15-082809
G-BH3-Surf-082709	G-BH3-7.5-082709	G-BH3-15-082709
G-BH4-Surf-082709	G-BH4-7.5-082709	G-BH4-15-082709
G-BH5-Surf-082709	G-BH5-7.5-082709	G-BH5-15-082709

See the attached Checklist and associated data results pages provided by Golder Associates for qualified sample results.

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho
LABORATORY: Test America		SDG: #SSH0166
SAMPLES	Collect:	MATRIX
G-BH1-Surf 7.5, 15	8-27, 28-09	SOIL BORINGS
BH2-7.5, Surf, 15	}	↓
BH3-Surf, 7.5, 15		
BH4-Surf, 7.5, 15		
BH5-Surf, 7.5, 15		

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA	BNA	Pest / PCB	TPH-Dx	PAH - SIM	OTHER	OTHER
1. Data Completeness		⊖	⊖	⊖	⊖		
2. Preservation, Holding Times		⊖	⊖	⊖	⊖		
3. GC/MS Tune, Inst. Performance		⊖	⊖	⊖	⊖		
4. Calibrations		⊖	⊖	⊖	⊖		
5. Surrogates		⊖	⊖	⊖	⊖ ^①		
6. Internal Standards		⊖	⊖	⊖	⊖		
7. Lab Blanks, Field Blanks		⊖	⊖	⊖	⊖		
8. Lab Duplicates, Field Duplicates		⊖	⊖	⊖	⊖		
9. LCS, Blank Spike, MS/MSD		⊖	⊖	⊖	⊖		
10. Compound Identification, TICs		⊖	⊖	⊖	⊖		
11. Result Verification, D.Limits		⊖	⊖	⊖	⊖		
12. Overall Summary		⊖	⊖	⊖	⊖		

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ^① Surrog. recoveries x 2 ↓ Assoc. results for -15 qualif. (J/UJ)

Validated by:

Reviewed by:

[Signature]

Date: Nov. 10, 2009

Date:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable:

YES ☒ NO ☐

1. Data Package Completeness (Check if present).....

☒ Case narrative
☒ Chain of Custody
☒ Sample Results
☒ Detection Limits
☒ GC/MS Tuning
☒ Initial Calibration
☒ Continuing Calib.

☒ Blank Results
☒ Surrogate Results
☒ Internal Standards
☒ MS/MSD, LCS Results
☒ Preparation Logs
☒ Analysis Run Logs
☒ Raw Data
☐ Other

☐ Acceptable
☒ Absent
☐ Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)..... ☒

Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection

BNA samples extracted within 7 days (14 day soil) of collection

BNA extracts analyzed within 40 days of collection

Pest/PCBs samples extracted within 7 days (14 day soil) of collection

Pest/PCBs extracts analyzed within 40 days of collection

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results: _____

Collected: 8/27-28

TPH-Dx Analysis: 9/1 prep < 14 Day ✓

PAHs prep 8/31 < 7 Day ✓

PCB prep 9/09 < 14 Day ✓

3. GC Instrument Tune, Performance Check..... ☒

GC/MS Tuning performed

GC/MS Tuning within control limits

GC/MS Tuning out of control limits, (qualify R/UR)

Res Chk Mix, MidPoint AB <60%, (J for detects, UR other)

P&M resolution <90% adj pks, (J for detects, UR other)

DDT, Endrin breakdown >20%, (J for DDD, DDT, Endrin,

Endrin Aldehyde, Endrin Ketone, or NJ/R)

Res Check Mix, MidPoint AB, TCMX, DCBP within RT windows from ICAL AB mixture (Fix or R/UR)

Comments/Qualified Results: _____

See Calib Section

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☐ NO ☐

4. Initial & Continuing Calibration (Check all that apply)..... ☐ ☐

- GC/MS Data: ☐ Cal RRFs > 0.05 all cmpnds (If no, J/UR), [> 0.01 for Poor Performers] VOA, SVOA
☐ Cal RSD of RRF < 30% all cmpnds (If no, J detects) [< 50% for Poor Performers] VOA
☐ Cal RSD of RRF < 20.5% all cmpnds (If no, J detects) [< 50% or *30% for Poor Performers] SVOA
 Note: *Applies to 2,4-DNT, 2-Nitrophenol, and 2,4-DMP only [SVOA].
☐ Continue Cal. +/- 30% Diff of RRF (If no, J/UJ) [+/- 50% Diff, Poor Performers] VOA, SVOA
☐ Continue Cal. %D < 25% all cmpnds (If no, J/UJ), VOA, SVOA
 Pesticide/PCB: ☐ RSD < 10% for performance checks (If no J detects)
☐ Stnds analyzed prior to analysis, & at proper frequency
☐ Continuing Cal. % Diff. < 15% for quant. (< 20% for confirm column)

TPH-Dx RRF ✓ R² = .998 ✓
 PAH time 8/31 ✓ ICAL 8/31 ✓ PCB RSD = 75 ✓ Benzo (flu) pyrene 29%
 Assoc. detects qualif. (J). NO Qual. COAL ✓ 9/61 Tune ✓ PCB 4-5
 9/62 Tune ✓ RRF ✓ or R² ✓ COAL %D < 25% ✓ 9/14 Tune ✓ RRF ✓
 COAL < 25% ✓

5. Surrogates (Check all that apply)..... ☐ ☒

- ☐ Surrogates analyzed
☐ Recoveries within Method Control (lab) limits (VOA: 80 - 120%, SVOA: Lab Established, PEST: 30-150%)
☐ Recoveries above Method Control limits (J detects only)
☐ Recoveries below Method Control limits but > 20% (J/UJ)
☐ Recoveries below 20%, 10% for PEST (J/UR for VOA, J/ UJ or UR for SVOA, J/UR for PEST)

Comments/Qualified Results

SVOA: 9/11 ✓ 9/12 ✓ 9/28 ✓
 PCB: 9/11 ✓ 9/14 ✓ 9/15 Low recov for -12 9/17 Low recov.
 for -11 and -14 - Single Surrog. only NO QUALIF.

PAHs: Batch # 80204 Samples 11, 06, 14, 09 Surrog. out
 of limit but single - NO QUALIF. Sample - 15 Low recovery

⊗ for N-Benz & ZFBP. Assoc. results Qualif. (J/UJ). -14 SAME for
 select analytes.

6. Internal Standards Performance..... ☐ ☐

- ☐ Internal standards added to all QC and samples
☐ Internal standards areas within Control Limits* [+/-40% VOA, +/-50% SVOA]*
 *Associated with 12 Hour CCV Stnd.
☐ Internal standards out of Control limits but > 10% (J/UJ)
☐ Internal standards zero or < 10% of Control limits (J/UR)
☐ Internal standards RTs within +/-20 sec window (If no, J/UJ)

Comments/Qualified Results:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☐7. Laboratory Blanks, Field Blanks (Check all that apply)..... ☒ ☐

- ☒ Method Blanks, Prep. Blanks analyzed after Cal Stnds and every 12 hours
☒ Method Blank Common Lab Contaminants, list: MeCl₂, Cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart
☒ Other Contaminants: Qualify results (< 5X RL) according to Chart below.
☒ Instrument blanks after all high level samples, All cmpnds must be <RL

Comments/Qualified Results: _____

Examples:

BLANK			SAMPLE		Q
MDL	Result	PQL	Result	Applied	
0.3	0.45	1.0	0.8	1.0 U	
0.3	0.99	1.0	1.8	1.8 J	
0.3	1.5	1.0	1.1	1.5 U	
0.3	1.5	1.0	1.8	1.8 J	
0.3	0	1.0	0.85	0.85 J	
0.3	0	1.0	1.8	1.8	

TPH-Dx: MB006 (mg/Kg) ✓ MB170PCB MB10K0048 ✓ 1/2 mg/Kg.PAH MB1K 0204 ✓ mg/Kg.8. Duplicate, Field Duplicates (Check all that apply)..... ☒ ☐

- ☒ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
☒ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
☒ Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results _____

TPH-Dx #0006 ✓ #0170 ✓PCB #0048 ✓PAH #0204 ✓9. MS/MSD, Lab Control Samples, Blank Spikes (Check all that apply).... ☒ ☐

- ☒ LCS %R 80-120%
☒ LCS %R 50-79% or >120%, results >IDL estimated (J)
☒ LCS %R 50-79% and results <IDL estimated (UJ)
☒ LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: _____

TPH-Dx LCS ✓ Dup ✓ MS ✓ #0006, #0170 - LCS ✓ Dup ✓ MS ✓PCB - LCS/LC52 ✓ #0048 MS/MSD (non Assoc.) ✓PAH - LCS ✓ MS/MSD on sample - 01 ✓ (#0204).

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

10. Compound Identification, TICs..... ☒ ☐

Comments/Qualified Results: _____

11. Result Verification, Detection Limits ☒ ☐

☐ All results supported in raw data
☐ Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: _____

12. Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-01 (G-BH1-Surf-082809)		Soil		Sampled: 08/28/09 11:35						
1-Methylnaphthalene	EPA 8270 mod	ND	---	0.00480	mg/kg dry	1x	9080204	08/31/09 13:00	08/31/09 19:34	
2-Methylnaphthalene	"	ND	---	0.00480	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00480	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00480	"	"	"	"	"	
Anthracene	"	ND	---	0.00480	"	"	"	"	"	
Benzo (a) anthracene	"	ND	---	0.00480	"	"	"	"	"	
Benzo (a) pyrene	"	ND	---	0.00480	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	---	0.00480	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	---	0.00480	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00480	"	"	"	"	"	
Chrysene	"	ND	---	0.00480	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	---	0.00480	"	"	"	"	"	
Fluoranthene	"	ND	---	0.00480	"	"	"	"	"	
Fluorene	"	ND	---	0.00480	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.00480	"	"	"	"	"	
Naphthalene	"	ND	---	0.00480	"	"	"	"	"	
Phenanthrene	"	ND	---	0.00480	"	"	"	"	"	
Pyrene	"	ND	---	0.00480	"	"	"	"	"	

Surrogate(s): Nitrobenzene-d5

69.8%

38.8 - 139 %

"

"

2-FBP

66.6%

40 - 132 %

"

"

p-Terphenyl-d14

99.6%

31.7 - 179 %

"

"

SSH0166-02 (G-BH1-7.5-082809)

Soil

Sampled: 08/28/09 12:10

1-Methylnaphthalene	EPA 8270 mod	ND	---	0.00452	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 08:11	
2-Methylnaphthalene	"	ND	---	0.00452	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00452	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00452	"	"	"	"	"	
Anthracene	"	ND	---	0.00452	"	"	"	"	"	
Benzo (a) anthracene	"	ND	---	0.00452	"	"	"	"	"	
Benzo (a) pyrene	"	ND	---	0.00452	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	---	0.00452	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	---	0.00452	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00452	"	"	"	"	"	
Chrysene	"	ND	---	0.00452	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	---	0.00452	"	"	"	"	"	
Fluoranthene	"	ND	---	0.00452	"	"	"	"	"	
Fluorene	"	ND	---	0.00452	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.00452	"	"	"	"	"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-02 (G-BH1-7.5-082809)		Soil		Sampled: 08/28/09 12:10						
Naphthalene	EPA 8270 mod.	ND	—	0.00452	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 08:11	
Phenanthrene	"	ND	—	0.00452	"	"	"	"	"	
Pyrene	"	ND	—	0.00452	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		74.6%			38.8 - 139 %	"				"
2-FBP		63.6%			40 - 132 %	"				"
p-Terphenyl-d14		120%			31.7 - 179 %	"				"
SSH0166-03 (G-BH1-16-082809)		Soil		Sampled: 08/28/09 12:30						
1-Methylnaphthalene	EPA 8270 mod.	0.0279	—	0.00487	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 08:32	
2-Methylnaphthalene	"	0.00779	—	0.00487	"	"	"	"	"	
Acenaphthene	"	0.00584	—	0.00487	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00487	"	"	"	"	"	
Anthracene	"	ND	—	0.00487	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00487	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00487	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00487	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00487	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00487	"	"	"	"	"	
Chrysene	"	ND	—	0.00487	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00487	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00487	"	"	"	"	"	
Fluorene	"	ND	—	0.00487	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00487	"	"	"	"	"	
Naphthalene	"	0.00908	—	0.00487	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00487	"	"	"	"	"	
Pyrene	"	ND	—	0.00487	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		52.0%			38.8 - 139 %	"				"
2-FBP		49.8%			40 - 132 %	"				"
p-Terphenyl-d14		65.4%			31.7 - 179 %	"				"

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-04 (G-BH2-7.5-082809)		Soil		Sampled: 08/28/09 09:50						
1-Methylnaphthalene	EPA 8270 mod.	0.00973	—	0.00461	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 09:15	
2-Methylnaphthalene	"	0.0159	—	0.00461	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00461	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00461	"	"	"	"	"	
Anthracene	"	ND	—	0.00461	"	"	"	"	"	
Benzo (a) anthracene	"	0.00461	—	0.00461	"	"	"	"	"	
Benzo (a) pyrene	"	0.00512	—	0.00461	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0138	—	0.00461	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00563	—	0.00461	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00461	"	"	"	"	"	
Chrysene	"	0.0102	—	0.00461	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00461	"	"	"	"	"	
Fluoranthene	"	0.00922	—	0.00461	"	"	"	"	"	
Fluorene	"	ND	—	0.00461	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00461	"	"	"	"	"	
Naphthalene	"	0.00768	—	0.00461	"	"	"	"	"	
Phenanthrene	"	0.00973	—	0.00461	"	"	"	"	"	
Pyrene	"	0.0164	—	0.00461	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		59.8%			38.8 - 139 %	"				
2-FBP		65.2%			40 - 132 %	"				
p-Terphenyl-d14		83.0%			31.7 - 179 %	"				

SSH0166-05 (G-BH2-Surf-082809)		Soil		Sampled: 08/28/09 09:15						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00476	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 18:31	
2-Methylnaphthalene	"	ND	—	0.00476	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00476	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00476	"	"	"	"	"	
Anthracene	"	ND	—	0.00476	"	"	"	"	"	
Benzo (a) anthracene	"	0.00585	—	0.00476	"	"	"	"	"	
Benzo (a) pyrene	"	0.00732	—	0.00476	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0102	—	0.00476	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0107	—	0.00476	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00476	"	"	"	"	"	
Chrysene	"	0.00634	—	0.00476	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00927	—	0.00476	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00476	"	"	"	"	"	
Fluorene	"	ND	—	0.00476	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00829	—	0.00476	"	"	"	"	"	
Naphthalene	"	ND	—	0.00476	"	"	"	"	"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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SSH0166-05 (G-BH2-Surf-082809)

Soil

Sampled: 08/28/09 09:15

Phenanthrene	EPA 8270 mod.	ND	—	0.00476	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 18:31	
Pyrene	"	0.00781	—	0.00476	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		67.4%			38.8 - 139 %	"			"	
2-FBP		63.8%			40 - 132 %	"			"	
p-Terphenyl-d14		107%			31.7 - 179 %	"			"	

SSH0166-06 (G-BH2-15-082809)

Soil

Sampled: 08/28/09 10:10

RL3

1-Methylnaphthalene	EPA 8270 mod.	0.811	—	0.0109	mg/kg dry	2x	9080204	08/31/09 13:00	09/01/09 13:33	
2-Methylnaphthalene	"	0.570	—	0.0109	"	"	"	"	"	
Acenaphthene	"	0.368	—	0.0109	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.0109	"	"	"	"	"	
Anthracene	"	ND	—	0.0109	"	"	"	"	"	
Benzo (a) anthracene	"	0.0426	—	0.0109	"	"	"	"	"	
Benzo (a) pyrene	"	0.0146	—	0.0109	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.0109	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0243	—	0.0109	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.0109	"	"	"	"	"	
Chrysene	"	0.0839	—	0.0109	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.0109	"	"	"	"	"	
Fluoranthene	"	0.0511	—	0.0109	"	"	"	"	"	
Fluorene	"	0.512	—	0.0109	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0109	—	0.0109	"	"	"	"	"	
Naphthalene	"	0.260	—	0.0109	"	"	"	"	"	
Phenanthrene	"	0.786	—	0.0109	"	"	"	"	"	
Pyrene	"	0.440	—	0.0109	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		134%			38.8 - 139 %	"			"	
2-FBP		72.0%			40 - 132 %	"			"	
p-Terphenyl-d14		211%			31.7 - 179 %	"			"	ZX

SSH0166-07 (G-BH3-Surf-082709)

Soil

Sampled: 08/27/09 16:10

RL3

1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00848	mg/kg dry	2x	9080204	08/31/09 13:00	09/02/09 18:18	
2-Methylnaphthalene	"	ND	—	0.00848	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00848	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00848	"	"	"	"	"	
Anthracene	"	ND	—	0.00848	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00848	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00848	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00848	"	"	"	"	"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-07 (G-BH3-Surf-082709)		Soil		Sampled: 08/27/09 16:10						RL3
Benzo (ghi) perylene	EPA 8270 mod.	0.0160	—	0.00848	mg/kg dry	2x	9080204	08/31/09 13:00	09/02/09 18:18	
Benzo (k) fluoranthene	"	ND	—	0.00848	"	"	"	"	"	
Chrysene	"	ND	—	0.00848	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00848	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00848	"	"	"	"	"	
Fluorene	"	ND	—	0.00848	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00848	"	"	"	"	"	
Naphthalene	"	ND	—	0.00848	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00848	"	"	"	"	"	
Pyrene	"	ND	—	0.00848	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5										
		53.6%		38.8 - 139 %	"					"
2-FBP		53.6%		40 - 132 %	"					"
p-Terphenyl-d14		81.6%		31.7 - 179 %	"					"

SSH0166-08 (G-BH3-7.5-082709)		Soil		Sampled: 08/27/09 16:45						
1-Methylnaphthalene	EPA 8270 mod.	0.00547	—	0.00485	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 09:58	
2-Methylnaphthalene	"	0.00795	—	0.00485	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00485	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00485	"	"	"	"	"	
Anthracene	"	ND	—	0.00485	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00485	"	"	"	"	"	
Benzo (a) pyrene	"	0.00497	—	0.00485	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.00646	—	0.00485	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00597	—	0.00485	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00485	"	"	"	"	"	
Chrysene	"	0.00895	—	0.00485	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00485	"	"	"	"	"	
Fluoranthene	"	0.00994	—	0.00485	"	"	"	"	"	
Fluorene	"	ND	—	0.00485	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00485	"	"	"	"	"	
Naphthalene	"	ND	—	0.00485	"	"	"	"	"	
Phenanthrene	"	0.0104	—	0.00485	"	"	"	"	"	
Pyrene	"	0.00994	—	0.00485	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5										
		52.6%		38.8 - 139 %	"					"
2-FBP		52.2%		40 - 132 %	"					"
p-Terphenyl-d14		86.4%		31.7 - 179 %	"					"

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-09 (G-BH3-15-082709)		Soil		Sampled: 08/27/09 17:15						RL3
1-Methylnaphthalene	EPA 8270 mod.	0.149	---	0.00519	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 17:05	
2-Methylnaphthalene	"	0.0358	---	0.00519	"	"	"	"	"	
Acenaphthene	"	0.0381	---	0.00519	"	"	"	"	"	A-01
Acenaphthylene	"	ND	---	0.00519	"	"	"	"	"	A-01
Anthracene	"	0.108	---	0.00519	"	"	"	"	"	
Benzo (a) anthracene	"	0.0306	---	0.00519	"	"	"	"	"	
Benzo (a) pyrene	"	0.0139	---	0.00519	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	---	0.00519	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00981	---	0.00519	"	"	"	"	"	
Benzo (k) fluoranthene	"	0.0208	---	0.00519	"	"	"	"	"	
Chrysene	"	0.0491	---	0.00519	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00808	---	0.00519	"	"	"	"	"	
Fluoranthene	"	0.0294	---	0.00519	"	"	"	"	"	
Fluorene	"	0.0531	---	0.00519	"	"	"	"	"	A-01
Indeno (1,2,3-cd) pyrene	"	0.00750	---	0.00519	"	"	"	"	"	
Naphthalene	"	ND	---	0.00519	"	"	"	"	"	
Phenanthrene	"	0.231	---	0.00519	"	"	"	"	"	
Pyrene	"	0.107	---	0.00519	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		83.6%		38.8 - 139 %	"			"		
2-FBP		36.0%		40 - 132 %	"			"		A-01, Z
p-Terphenyl-d14		64.2%		31.7 - 179 %	"			"		

SSH0166-10 (G-BH4-Surf-082709)		Soil		Sampled: 08/27/09 09:50						
1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.00429	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 07:03	
2-Methylnaphthalene	"	ND	---	0.00429	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00429	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00429	"	"	"	"	"	
Anthracene	"	ND	---	0.00429	"	"	"	"	"	A-01a
Benzo (a) anthracene	"	0.0114	---	0.00429	"	"	"	"	"	
Benzo (a) pyrene	"	0.0129	---	0.00429	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0324	---	0.00429	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00905	---	0.00429	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00429	"	"	"	"	"	
Chrysene	"	0.0100	---	0.00429	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00476	---	0.00429	"	"	"	"	"	
Fluoranthene	"	0.00762	---	0.00429	"	"	"	"	"	A-01a
Fluorene	"	ND	---	0.00429	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00667	---	0.00429	"	"	"	"	"	
Naphthalene	"	ND	---	0.00429	"	"	"	"	"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-10 (G-BH4-Surf-082709)		Soil		Sampled: 08/27/09 09:50						
Phenanthrene	EPA 8270 mod.	ND	—	0.00429	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 07:03	A-01a
Pyrene	"	0.0224	—	0.00429	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		60.0%		38.8 - 139 %		"		"		
2-FBP		67.2%		40 - 132 %		"		"		
p-Terphenyl-d14		110%		31.7 - 179 %		"		"		
SSH0166-11 (G-BH4-7.5-082709)		Soil		Sampled: 08/27/09 10:20						
1-Methylnaphthalene	EPA 8270 mod.	1.74	—	0.00865	mg/kg dry	2x	9080204	08/31/09 13:00	09/15/09 17:48	
2-Methylnaphthalene	"	1.60	—	0.00865	"	"	"	"	"	
Acenaphthene	"	0.168	—	0.00865	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00865	"	"	"	"	"	I
Anthracene	"	0.615	—	0.00865	"	"	"	"	"	
Benzo (a) anthracene	"	0.0778	—	0.00865	"	"	"	"	"	
Benzo (a) pyrene	"	0.0413	—	0.00865	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0471	—	0.00865	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0211	—	0.00865	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00865	"	"	"	"	"	
Chrysene	"	0.196	—	0.00865	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00865	"	"	"	"	"	
Fluoranthene	"	0.153	—	0.00865	"	"	"	"	"	
Fluorene	"	0.280	—	0.00865	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00865	—	0.00865	"	"	"	"	"	
Naphthalene	"	ND	—	0.00865	"	"	"	"	"	
Phenanthrene	"	1.64	—	0.00865	"	"	"	"	"	
Pyrene	"	0.146	—	0.00865	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		236%		38.8 - 139 %		"		"		ZX
2-FBP		21.2%		40 - 132 %		"		"		I
p-Terphenyl-d14		98.4%		31.7 - 179 %		"		"		ZX

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-12 (G-BH4-15-082709)		Soil		Sampled: 08/27/09 10:15						
Benzo (ghi) perylene	EPA 8270 mod.	ND	---	0.00459	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 09:36	
Benzo (k) fluoranthene	"	ND	---	0.00459	"	"	"	"	"	
Chrysene	"	ND	---	0.00459	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	---	0.00459	"	"	"	"	"	
Fluoranthene	"	ND	---	0.00459	"	"	"	"	"	
Fluorene	"	ND	---	0.00459	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.00459	"	"	"	"	"	
Naphthalene	"	ND	---	0.00459	"	"	"	"	"	
Phenanthrene	"	0.00501	---	0.00459	"	"	"	"	"	
Pyrene	"	ND	---	0.00459	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		58.8%		38.8 - 139 %		"		"		
2-FBP		57.0%		40 - 132 %		"		"		
p-Terphenyl-d14		70.4%		31.7 - 179 %		"		"		

SSH0166-13 (G-BH5-Surf-082709)		Soil		Sampled: 08/27/09 12:40							RL3
1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.00999	mg/kg dry	2x	9080204	08/31/09 13:00	09/01/09 12:50		
2-Methylnaphthalene	"	ND	---	0.00999	"	"	"	"	"		
Acenaphthene	"	ND	---	0.00999	"	"	"	"	"		
Acenaphthylene	"	ND	---	0.00999	"	"	"	"	"		
Anthracene	"	ND	---	0.00999	"	"	"	"	"		
Benzo (a) anthracene	"	ND	---	0.00999	"	"	"	"	"		
Benzo (a) pyrene	"	0.0133	---	0.00999	"	"	"	"	"		
Benzo (b) fluoranthene	"	0.0257	---	0.00999	"	"	"	"	"		
Benzo (ghi) perylene	"	0.0200	---	0.00999	"	"	"	"	"		
Benzo (k) fluoranthene	"	ND	---	0.00999	"	"	"	"	"		
Chrysene	"	0.0114	---	0.00999	"	"	"	"	"		
Dibenzo (a,i) anthracene	"	ND	---	0.00999	"	"	"	"	"		
Fluoranthene	"	ND	---	0.00999	"	"	"	"	"		
Fluorene	"	ND	---	0.00999	"	"	"	"	"		
Indeno (1,2,3-cd) pyrene	"	0.0124	---	0.00999	"	"	"	"	"		
Naphthalene	"	ND	---	0.00999	"	"	"	"	"		
Phenanthrene	"	ND	---	0.00999	"	"	"	"	"		
Pyrene	"	0.0238	---	0.00999	"	"	"	"	"		
Surrogate(s): Nitrobenzene-d5		65.6%		38.8 - 139 %		"		"			
2-FBP		61.2%		40 - 132 %		"		"			
p-Terphenyl-d14		178%		31.7 - 179 %		"		"			

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Gelder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-14 (G-BH5-7.5-082709)		Soil		Sampled: 08/27/09 13:20						
1-Methylnaphthalene	EPA 8270 mod.	4.04	—	0.0529	mg/kg dry	10x	9080204	08/31/09 13:00	09/01/09 16:54	
2-Methylnaphthalene	"	5.21	—	0.0529	"	"	"	"	"	
Acenaphthene	"	0.347 J	—	0.0106	"	2x	"	"	09/01/09 14:37	102
Acenaphthylene	"	ND UT	—	0.0106	"	"	"	"	"	102
Anthracene	"	0.315 J	—	0.0106	"	"	"	"	"	102
Benzo (a) anthracene	"	0.0413	—	0.0106	"	"	"	"	"	
Benzo (a) pyrene	"	0.0171	—	0.0106	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.0106	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0151	—	0.0106	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.0106	"	"	"	"	"	
Chrysene	"	0.0816	—	0.0106	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.0106	"	"	"	"	"	
Fluoranthene	"	0.0826	—	0.0106	"	"	"	"	"	102
Fluorene	"	0.545	—	0.0106	"	"	"	"	"	102
Indeno (1,2,3-cd) pyrene	"	ND	—	0.0106	"	"	"	"	"	
Naphthalene	"	0.504	—	0.0106	"	"	"	"	"	
Phenanthrene	"	0.802	—	0.0106	"	"	"	"	"	102
Pyrene	"	0.494	—	0.0106	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		107%		38.8 - 139 %	"	"	"	"	"	
2-FBP		44.8%		40 - 132 %	"	"	"	"	"	102
p-Terphenyl-d14		223%		31.7 - 179 %	"	"	"	"	"	ZX

SSH0166-15 (G-BH5-15-082709)

Soil

Sampled: 08/27/09 13:45

1-Methylnaphthalene	EPA 8270 mod.	0.0769 J	—	0.00487	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 13:12	
2-Methylnaphthalene	"	0.0628 J	—	0.00487	"	"	"	"	"	
Acenaphthene	"	0.0271 J	—	0.00487	"	"	"	"	"	
Acenaphthylene	"	ND UT	—	0.00487	"	"	"	"	"	
Anthracene	"	0.0173 J	—	0.00487	"	"	"	"	"	
Benzo (a) anthracene	"	0.00595 J	—	0.00487	"	"	"	"	"	
Benzo (a) pyrene	"	ND UT	—	0.00487	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND UT	—	0.00487	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00487 J	—	0.00487	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND UT	—	0.00487	"	"	"	"	"	
Chrysene	"	0.0146 J	—	0.00487	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND UT	—	0.00487	"	"	"	"	"	
Fluoranthene	"	0.0146 J	—	0.00487	"	"	"	"	"	
Fluorene	"	0.0401 J	—	0.00487	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND UT	—	0.00487	"	"	"	"	"	
Naphthalene	"	0.0541 J	—	0.00487	"	"	"	"	"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
SSH0166-15 (G-BHS-15-082709)		Soil						Sampled: 08/27/09 13:45		
Phenanthrene	EPA 8270 mod.	0.0487	J	0.00487	mg/kg dry	1x	9080204	08/31/09 13:00	09/01/09 13:12	
Pyrene	"	0.0514	J	0.00487	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		19.8%			38.8 - 139 %	"				Z
2-FBP		25.6%			40 - 132 %	"				Z
p-Terphenyl-d14		75.2%			31.7 - 179 %	"				

108 11-10-09

TestAmerica Spokane

Amended Report

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Randee Decker, Project Manager



Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-01 (G-BH1-Surf-082809)		Soil		Sampled: 08/28/09 11:35						
PCB-1016	EPA 8082	ND	---	9.87	ug/kg dry	1x	9090048	09/09/09 09:20	09/11/09 21:58	
PCB-1221	"	ND	---	9.87	"	"	"	"	09/11/09 21:36	
PCB-1232	"	ND	---	9.87	"	"	"	"	"	
PCB-1242	"	ND	---	9.87	"	"	"	"	"	
PCB-1248	"	ND	---	9.87	"	"	"	"	"	
PCB-1254	"	ND	---	9.87	"	"	"	"	"	
PCB-1260	"	ND	---	9.87	"	"	"	"	09/11/09 21:58	
Surrogate(s): TCX		65.3%		27.9 - 154 %		"		"		
Decachlorobiphenyl		57.2%		35 - 157 %		"		"		
SSH0166-02 (G-BH1-7.5-082809)		Soil		Sampled: 08/28/09 12:10						
PCB-1016	EPA 8082	ND	---	9.95	ug/kg dry	1x	9090048	09/09/09 09:20	09/11/09 22:21	
PCB-1221	"	ND	---	9.95	"	"	"	"	09/11/09 21:58	
PCB-1232	"	ND	---	9.95	"	"	"	"	"	
PCB-1242	"	ND	---	9.95	"	"	"	"	"	
PCB-1248	"	ND	---	9.95	"	"	"	"	"	
PCB-1254	"	ND	---	9.95	"	"	"	"	"	
PCB-1260	"	ND	---	9.95	"	"	"	"	09/11/09 22:21	
Surrogate(s): TCX		96.1%		27.9 - 154 %		"		"		
Decachlorobiphenyl		93.6%		35 - 157 %		"		"		
SSH0166-03 (G-BH1-16-082809)		Soil		Sampled: 08/28/09 12:30						
PCB-1016	EPA 8082	ND	---	9.93	ug/kg dry	1x	9090048	09/09/09 09:20	09/11/09 22:44	
PCB-1221	"	ND	---	9.93	"	"	"	"	09/11/09 22:21	
PCB-1232	"	ND	---	9.93	"	"	"	"	"	
PCB-1242	"	ND	---	9.93	"	"	"	"	"	
PCB-1248	"	ND	---	9.93	"	"	"	"	"	
PCB-1254	"	ND	---	9.93	"	"	"	"	"	
PCB-1260	"	ND	---	9.93	"	"	"	"	09/11/09 22:44	
Surrogate(s): TCX		74.5%		27.9 - 154 %		"		"		
Decachlorobiphenyl		76.8%		35 - 157 %		"		"		

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-04	(G-BH2-7.5-082809)	Soil		Sampled: 08/28/09 09:50						
PCB-1016	EPA 8082	ND	—	9.68	ug/kg dry	1x	9090048	09/09/09 09:20	09/11/09 23:06	
PCB-1221	"	ND	—	9.68	"	"	"	"	09/11/09 22:44	
PCB-1232	"	ND	—	9.68	"	"	"	"	"	
PCB-1242	"	ND	—	9.68	"	"	"	"	"	
PCB-1248	"	ND	—	9.68	"	"	"	"	"	
PCB-1254	"	ND	—	9.68	"	"	"	"	"	
PCB-1260	"	ND	—	9.68	"	"	"	"	09/11/09 23:06	
Surrogate(s): TCX		81.1%		27.9 - 154 %		"		"		
Decachlorobiphenyl		78.1%		35 - 157 %		"		"		
SSH0166-05	(G-BH2-Surf-082809)	Soil		Sampled: 08/28/09 09:15						
PCB-1016	EPA 8082	ND	—	9.66	ug/kg dry	1x	9090048	09/09/09 09:20	09/11/09 23:29	
PCB-1221	"	ND	—	9.66	"	"	"	"	09/11/09 23:06	
PCB-1232	"	ND	—	9.66	"	"	"	"	"	
PCB-1242	"	ND	—	9.66	"	"	"	"	"	
PCB-1248	"	ND	—	9.66	"	"	"	"	"	
PCB-1254	"	ND	—	9.66	"	"	"	"	"	
PCB-1260	"	ND	—	9.66	"	"	"	"	09/11/09 23:29	
Surrogate(s): TCX		96.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		69.6%		35 - 157 %		"		"		
SSH0166-06	(G-BH2-15-082809)	Soil		Sampled: 08/28/09 10:10						
PCB-1016	EPA 8082	ND	—	9.85	ug/kg dry	1x	9090048	09/09/09 09:20	09/11/09 23:51	
PCB-1221	"	ND	—	9.85	"	"	"	"	09/11/09 23:29	
PCB-1232	"	ND	—	9.85	"	"	"	"	"	
PCB-1242	"	ND	—	9.85	"	"	"	"	"	
PCB-1248	"	ND	—	9.85	"	"	"	"	"	
PCB-1254	"	ND	—	9.85	"	"	"	"	"	
PCB-1260	"	ND	—	9.85	"	"	"	"	09/11/09 23:51	
Surrogate(s): TCX		76.1%		27.9 - 154 %		"		"		
Decachlorobiphenyl		39.8%		35 - 157 %		"		"		

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager



Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 11:30

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-07 (G-BH3-Surf-082709)		Soil		Sampled: 08/27/09 16:10						
PCB-1016	EPA 8082	ND	---	9.76	ug/kg dry	1x	9090048	09/09/09 09:20	09/14/09 23:29	
PCB-1221	"	ND	---	9.76	"	"	"	"	09/14/09 23:06	
PCB-1232	"	ND	---	9.76	"	"	"	"	"	
PCB-1242	"	ND	---	9.76	"	"	"	"	"	
PCB-1248	"	ND	---	9.76	"	"	"	"	"	
PCB-1254	"	ND	---	9.76	"	"	"	"	"	
PCB-1260	"	ND	---	9.76	"	"	"	"	09/14/09 23:29	
Surrogate(s): TCX			67.6%		27.9 - 154 %	"			"	
Decachlorobiphenyl			61.2%		35 - 157 %	"			"	
SSH0166-08 (G-BH3-7.5-082709)		Soil		Sampled: 08/27/09 16:45						
PCB-1016	EPA 8082	ND	---	9.84	ug/kg dry	1x	9090048	09/09/09 09:20	09/14/09 23:52	
PCB-1221	"	ND	---	9.84	"	"	"	"	09/14/09 23:29	
PCB-1232	"	ND	---	9.84	"	"	"	"	"	
PCB-1242	"	ND	---	9.84	"	"	"	"	"	
PCB-1248	"	ND	---	9.84	"	"	"	"	"	
PCB-1254	"	ND	---	9.84	"	"	"	"	"	
PCB-1260	"	ND	---	9.84	"	"	"	"	09/14/09 23:52	
Surrogate(s): TCX			73.7%		27.9 - 154 %	"			"	
Decachlorobiphenyl			63.9%		35 - 157 %	"			"	
SSH0166-09 (G-BH3-15-082709)		Soil		Sampled: 08/27/09 17:15						
PCB-1016	EPA 8082	ND	---	9.87	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 00:14	
PCB-1221	"	ND	---	9.87	"	"	"	"	09/14/09 23:52	
PCB-1232	"	ND	---	9.87	"	"	"	"	"	
PCB-1242	"	ND	---	9.87	"	"	"	"	"	
PCB-1248	"	ND	---	9.87	"	"	"	"	"	
PCB-1254	"	ND	---	9.87	"	"	"	"	"	
PCB-1260	"	ND	---	9.87	"	"	"	"	09/15/09 00:14	
Surrogate(s): TCX			70.9%		27.9 - 154 %	"			"	
Decachlorobiphenyl			67.9%		35 - 157 %	"			"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-10 (G-BH4-Surf-082709)		Soil							Sampled: 08/27/09 09:50	
PCB-1016	EPA 8082	ND	—	9.86	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 00:37	
PCB-1221	"	ND	—	9.86	"	"	"	"	09/15/09 00:14	
PCB-1232	"	ND	—	9.86	"	"	"	"	"	
PCB-1242	"	ND	—	9.86	"	"	"	"	"	
PCB-1248	"	ND	—	9.86	"	"	"	"	"	
PCB-1254	"	ND	—	9.86	"	"	"	"	"	
PCB-1260	"	ND	—	9.86	"	"	"	"	09/15/09 00:37	

Surrogate(s): TCX

88.5%

27.9 - 154 %

"

"

Decachlorobiphenyl

65.2%

35 - 157 %

"

"

SSH0166-11 (G-BH4-7.5-082709)

Soil

Sampled: 08/27/09 10:20

PCB-1016	EPA 8082	ND	—	9.95	ug/kg dry	1x	9090048	09/09/09 09:20	09/17/09 07:17	
PCB-1221	"	ND	—	9.95	"	"	"	"	"	
PCB-1232	"	ND	—	9.95	"	"	"	"	"	
PCB-1242	"	ND	—	9.95	"	"	"	"	"	
PCB-1248	"	ND	—	9.95	"	"	"	"	"	
PCB-1254	"	ND	—	9.95	"	"	"	"	"	
PCB-1260	"	ND	—	9.95	"	"	"	"	"	

Surrogate(s): TCX

102%

27.9 - 154 %

"

"

Decachlorobiphenyl

21.0%

35 - 157 %

"

"

Z

SSH0166-12 (G-BH4-15-082709)

Soil

Sampled: 08/27/09 10:15

PCB-1016	EPA 8082	ND	—	9.52	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 00:59	
PCB-1221	"	ND	—	9.52	"	"	"	"	09/15/09 00:37	
PCB-1232	"	ND	—	9.52	"	"	"	"	"	
PCB-1242	"	ND	—	9.52	"	"	"	"	"	
PCB-1248	"	ND	—	9.52	"	"	"	"	"	
PCB-1254	"	ND	—	9.52	"	"	"	"	"	
PCB-1260	"	ND	—	9.52	"	"	"	"	09/15/09 00:59	

Surrogate(s): TCX

32.5%

27.9 - 154 %

"

"

Decachlorobiphenyl

34.8%

35 - 157 %

"

"

Z

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-13 (G-BH5-Surf-082709)		Soil		Sampled: 08/27/09 12:40						
PCB-1016	EPA 8082	ND	---	9.85	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 01:22	
PCB-1221	"	ND	---	9.85	"	"	"	"	09/15/09 00:59	
PCB-1232	"	ND	---	9.85	"	"	"	"	"	
PCB-1242	"	ND	---	9.85	"	"	"	"	"	
PCB-1248	"	ND	---	9.85	"	"	"	"	"	
PCB-1254	"	ND	---	9.85	"	"	"	"	"	
PCB-1260	"	ND	---	9.85	"	"	"	"	09/15/09 01:22	
Surrogate(s): TCX		85.0%		27.9 - 154 %		"		"		
Decachlorobiphenyl		58.8%		35 - 157 %		"		"		
SSH0166-14 (G-BH5-7.5-082709)		Soil		Sampled: 08/27/09 13:20						
PCB-1016	EPA 8082	ND	---	9.98	ug/kg dry	1x	9090048	09/09/09 09:20	09/17/09 07:40	
PCB-1221	"	ND	---	9.98	"	"	"	"	"	
PCB-1232	"	ND	---	9.98	"	"	"	"	"	
PCB-1242	"	ND	---	9.98	"	"	"	"	"	
PCB-1248	"	ND	---	9.98	"	"	"	"	"	
PCB-1254	"	ND	---	9.98	"	"	"	"	"	
PCB-1260	"	ND	---	9.98	"	"	"	"	"	
Surrogate(s): TCX		60.3%		27.9 - 154 %		"		"		
Decachlorobiphenyl		23.0%		35 - 157 %		"		" Z		
SSH0166-15 (G-BH5-15-082709)		Soil		Sampled: 08/27/09 13:45						
PCB-1016	EPA 8082	ND	---	9.74	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 02:30	
PCB-1221	"	ND	---	9.74	"	"	"	"	09/15/09 01:22	
PCB-1232	"	ND	---	9.74	"	"	"	"	"	
PCB-1242	"	ND	---	9.74	"	"	"	"	"	
PCB-1248	"	ND	---	9.74	"	"	"	"	"	
PCB-1254	"	ND	---	9.74	"	"	"	"	"	
PCB-1260	"	ND	---	9.74	"	"	"	"	09/15/09 02:30	
Surrogate(s): TCX		61.3%		27.9 - 154 %		"		09/15/09 01:45		
Decachlorobiphenyl		49.2%		35 - 157 %		"		"		

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 11:30

Semivolatile Petroleum Products by NWTPH-Dx
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-01 (G-BH1-Surf-082809)		Soil		Sampled: 08/28/09 11:35						
Diesel Range Hydrocarbons	NWTPH-Dx	37.8	—	10.3	mg/kg dry	1x	9090006	09/01/09 13:16	09/11/09 20:23	
Heavy Oil Range Hydrocarbons	"	349	—	25.7	"	"	"	"	"	
Surrogate(s): 2-FBP		90.4%			50 - 150 %	"			"	
p-Terphenyl-d14		103%			50 - 150 %	"			"	
SSH0166-02 (G-BH1-7.5-082809)		Soil		Sampled: 08/28/09 12:10						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	113	mg/kg dry	10x	9090006	09/01/09 13:16	09/11/09 20:46	
Heavy Oil Range Hydrocarbons	"	201	—	170	"	"	"	"	"	
Surrogate(s): 2-FBP		104%			50 - 150 %	"			"	
p-Terphenyl-d14		123%			50 - 150 %	"			"	
SSH0166-03 (G-BH1-16-082809)		Soil		Sampled: 08/28/09 12:30						
Diesel Range Hydrocarbons	NWTPH-Dx	262	—	14.6	mg/kg dry	1x	9090006	09/01/09 13:16	09/11/09 21:10	
Heavy Oil Range Hydrocarbons	"	96.4	—	36.5	"	"	"	"	"	
Surrogate(s): 2-FBP		114%			50 - 150 %	"			"	
p-Terphenyl-d14		110%			50 - 150 %	"			"	
SSH0166-04 (G-BH2-7.5-082809)		Soil		Sampled: 08/28/09 09:50						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.5	mg/kg dry	1x	9090006	09/01/09 13:16	09/11/09 21:33	
Heavy Oil Range Hydrocarbons	"	ND	—	28.8	"	"	"	"	"	
Surrogate(s): 2-FBP		90.8%			50 - 150 %	"			"	
p-Terphenyl-d14		113%			50 - 150 %	"			"	
SSH0166-05 (G-BH2-Surf-082809)		Soil		Sampled: 08/28/09 09:15						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.0	mg/kg dry	1x	9090006	09/01/09 13:16	09/11/09 21:57	
Heavy Oil Range Hydrocarbons	"	60.1	—	27.4	"	"	"	"	"	
Surrogate(s): 2-FBP		97.9%			50 - 150 %	"			"	
p-Terphenyl-d14		114%			50 - 150 %	"			"	
SSH0166-06RE1 (G-BH2-15-082809)		Soil		Sampled: 08/28/09 10:10						
Diesel Range Hydrocarbons	NWTPH-Dx	20.7	—	13.7	mg/kg dry	1x	9090170	09/01/09 13:16	09/28/09 11:52	
Heavy Oil Range Hydrocarbons	"	50.7	—	34.2	"	"	"	"	"	
Surrogate(s): 2-FBP		88.0%			50 - 150 %	"			"	
p-Terphenyl-d14		129%			50 - 150 %	"			"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager



Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 11:30

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-07 (G-BH3-Surf-082709)		Soil		Sampled: 08/27/09 16:10						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	21.2	mg/kg dry	1x	9090006	09/01/09 13:16	09/11/09 22:44	
Heavy Oil Range Hydrocarbons	"	91.1	---	53.0	"	"	"	"	"	
Surrogate(s): 2-FBP		97.0%			50 - 150 %	"			"	
p-Terphenyl-d14		116%			50 - 150 %	"			"	
SSH0166-08 (G-BH3-7.5-082709)		Soil		Sampled: 08/27/09 16:45						
Diesel Range Hydrocarbons	NWTPH-Dx	12.2	---	11.2	mg/kg dry	1x	9090006	09/01/09 13:16	09/11/09 23:07	
Heavy Oil Range Hydrocarbons	"	37.5	---	28.0	"	"	"	"	"	
Surrogate(s): 2-FBP		97.9%			50 - 150 %	"			"	
p-Terphenyl-d14		119%			50 - 150 %	"			"	
SSH0166-09 (G-BH3-15-082709)		Soil		Sampled: 08/27/09 17:15						
Diesel Range Hydrocarbons	NWTPH-Dx	601	---	26.0	mg/kg dry	1x	9090006	09/01/09 13:16	09/12/09 00:17	
Heavy Oil Range Hydrocarbons	"	345	---	64.9	"	"	"	"	"	
Surrogate(s): 2-FBP		113%			50 - 150 %	"			"	
p-Terphenyl-d14		116%			50 - 150 %	"			"	
SSH0166-10 (G-BH4-Surf-082709)		Soil		Sampled: 08/27/09 09:50						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	21.4	mg/kg dry	1x	9090006	09/01/09 13:16	09/12/09 00:41	
Heavy Oil Range Hydrocarbons	"	68.6	---	53.6	"	"	"	"	"	
Surrogate(s): 2-FBP		95.3%			50 - 150 %	"			"	
p-Terphenyl-d14		117%			50 - 150 %	"			"	
SSH0166-11 (G-BH4-7.5-082709)		Soil		Sampled: 08/27/09 10:20						
Diesel Range Hydrocarbons	NWTPH-Dx	2380	---	108	mg/kg dry	5x	9090006	09/01/09 13:16	09/12/09 01:04	
Heavy Oil Range Hydrocarbons	"	1360	---	270	"	"	"	"	"	
Surrogate(s): 2-FBP		108%			50 - 150 %	"			"	
p-Terphenyl-d14		64.2%			50 - 150 %	"			"	
SSH0166-12 (G-BH4-15-082709)		Soil		Sampled: 08/27/09 10:15						
Diesel Range Hydrocarbons	NWTPH-Dx	19.2	---	12.5	mg/kg dry	1x	9090006	09/01/09 13:16	09/12/09 01:28	
Heavy Oil Range Hydrocarbons	"	ND	---	31.3	"	"	"	"	"	
Surrogate(s): 2-FBP		98.7%			50 - 150 %	"			"	
p-Terphenyl-d14		119%			50 - 150 %	"			"	

TestAmerica Spokane

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Amended Report

Randee Decker, Project Manager

Amended Report

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 11:30

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0166-13 (G-BH5-Surf-082709)		Soil		Sampled: 08/27/09 12:40						
Diesel Range Hydrocarbons	NWTPH-Dx	30.1	---	21.4	mg/kg dry	1x	9090006	09/01/09 13:16	09/12/09 01:51	
Heavy Oil Range Hydrocarbons	"	201	---	53.5	"	"	"	"	"	
Surrogate(s): 2-FBP		89.0%		50 - 150 %		"		"		
p-Terphenyl-d14		106%		50 - 150 %		"		"		
SSH0166-14 (G-BH5-7.5-082709)		Soil		Sampled: 08/27/09 13:20						
Diesel Range Hydrocarbons	NWTPH-Dx	1060	---	45.4	mg/kg dry	2x	9090006	09/01/09 13:16	09/12/09 02:15	
Heavy Oil Range Hydrocarbons	"	703	---	113	"	"	"	"	"	
Surrogate(s): 2-FBP		117%		50 - 150 %		"		"		
p-Terphenyl-d14		107%		50 - 150 %		"		"		
SSH0166-15 (G-BH5-15-082709)		Soil		Sampled: 08/27/09 13:45						
Diesel Range Hydrocarbons	NWTPH-Dx	109	---	12.2	mg/kg dry	1x	9090006	09/01/09 13:16	09/12/09 02:38	
Heavy Oil Range Hydrocarbons	"	170	---	30.5	"	"	"	"	"	
Surrogate(s): 2-FBP		90.6%		50 - 150 %		"		"		
p-Terphenyl-d14		102%		50 - 150 %		"		"		

TestAmerica Spokane

Amended Report

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



ecology and environment, inc.

International Specialists in the Environment

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MEMORANDUM

DATE: May 12, 2010

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site, Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of 24 samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed as listed in the Tier III and IV Data Validation Summary Checklist (attached). Target analyte list (TAL) metals (EPA Methods 6010, 6020, and 7470A), Volatile Organic Compound (VOC; EPA Method 8260), polychlorinated biphenyl (PCB; EPA Method 8082), diesel-range total petroleum hydrocarbons (Method NWTPH-Dx), and semivolatile organic compounds (SVOCs; EPA Methods 8270 and 8270-SIM) analyses were performed by Test America, Spokane Valley, Washington.

The samples were numbered:

GTP1-10.5-082709	GTP1-13.5-082709	GTP3-3.5-082709	GTP3-5-082709
GTP3-13.5-082709	GTP4-2.5-082709	GTP4-8.0-082709	GTP5-3.0-082709
GTP5-7.0-082709	GTP6-10-082809	GTP6-2.5-082809	GTP6-17-082809
GTP6-2.5-082809	GTP7-10.0-082809	GTP7-18-082809	GTP2-2.5-082709
GTP2-8-082709	GTP2-13-082709	GTP1-2.5-082709	GTP5-11-082809
TS-COMP-1	TS-COMP-2	TS-COMP-3	GTP4-6.0-082709

See the attached Checklists and associated data results pages provided by Golder Associates for qualified sample results.

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: SSH0168	
SAMPLES	Collect	MATRIX	
SSH0168-01	8/27/09	and SSH0168-14	8-28-09
SSH0168-02		-15	
SSH0168-03		-16	
SSH0168-04		-17	8-27-09
SSH0168-05		-18	
SSH0168-06		-19	
SSH0168-07		-20	
SSH0168-09		-21	8-28-09
SSH0168-10		-22	8-27-09
SSH0168-11	8-28-09	-23	
SSH0168-12		-24	
SSH0168-13		-25	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES 6010	ICP/ MS 6020	Hg/ Se 7074	CN	Anions	OTHER
1. Data Completeness	O	O	O			
2. Holding Times	O	O	O			
3. Calibration	O	O	O			
4. Blanks →	O	X ¹	O			
5. Lab Duplicate, Field Duplicate RPD	O	O	O			
6. LCS, Blank Spike, MFS →	X ²	O	O			
7. Matrix Spike, MSD →	O	O	O			
8. GFAA, MSA, <u>Serial Dil.</u>	X ³	X ³	O			
9. Detection Limits, Other QC	O ⁴	O	O			
10. Data Verification, Overall Summary	O	O	O			

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Cd & Th detected in prep blank; Multiple sample detects qualified as 'U'.

② Na recovery in LCS ↓ & assoc. results qual. (J/UJ).

③ Sample -01 & -13 qualif. (J/UJ) due to Ser. Dilute > 10%.

④ Fe & Ag do not meet Regulatory Screen Level @ the RL.

Validated by:

Reviewed by:

Date: Nov. 10, 2009

Date:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable:
YES NO

1. Date Package Completeness (Check if present)..... ☒ ☐

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ ICP/CCV Results
- ☒ Blank Results
- ☒ ICP Interference Check Results
- ☒ Spike Recovery Results
- ☒ Duplicate Results
- ☒ LCS Results
- ☒ Standard Addition Results
- ☒ ICP Serial Dilution

- ☒ Instrument Det. Limits
- ☒ ICP Correction Factors
- ☒ ICP Linear Ranges
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ ICP Raw Data
- ☒ GFAA Raw Data
- ☒ Hg Raw Data
- ☒ Cyanide Raw Data
- ☒ Other _____

- ☒ Acceptable
- ☒ Absent
- ☒ Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)..... ☒ ☐

- ☐ ICP/GFAA metals completed in <6 months from collection
- ☐ Mercury analyzed in <28 days from collection
- ☐ Cyanide completed in 14 days from collection

Comments/Qualified Results: See Summary page - No Quals.

3. Calibrations (Check all that apply)..... ☒ ☐

- ☐ ICP/CCV %R for ICP/AA, 90%-110%, acceptable
- ☐ ICP/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- ☐ ICP/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- ☐ ICP/CCV %R 80-120% for Hg, results accepted
- ☐ CRDL Check Std %R 70 - 130, (50-150 SbPbTi)

- ☐ ICP/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- ☐ ICP/CCV %R 85-115% for Cyanide, results acceptable
- ☐ ICP/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- ☐ ICP/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: Associated Samples tested with 9/14 - 9/16 batch - NO QUALIF Applied.

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

4. Blanks (Check all that apply).....

☐

☒

____ Detects reported in ICB/CCB list:
____ Detects in preparation blanks, list:
____ Detects in field blanks, list

Qualified as undetected (U) all sample concentrations $\leq 10X$ any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: 6010 - No qualif.

9/14 6020 : # 177/16A x10 results 182/16A 7074 Hg # 49654 ✓
Sb .138 mg/kg Al 7.72 49657 ✓
→ Ba .298 Sb .072
Be .170 Ba .159
⊗ → Cd .206 Co .022
Co .0096 Pb .069
Cu .050 ⊗ Th .480
Pb .154 V 1.66
⊗ → Th .65
→ V .29

5. Duplicates (Check all that apply).....

☒

☐

____ Duplicate RPD $\leq 20\%$ for waters ($\leq 35\%$ for soils) for results $> 5X$ CRDL
____ Duplicate range is within $\pm CRDL$ ($\pm 2X$ CRDL for soils) for results $< 5X$ CRDL
____ Field Duplicate ID _____

Comments/Qualified Results

6010 : # 50177, 50182

6020 # 50224 ✓ 50177 ✓

Hg 49654 ✓

7. Laboratory Control Samples, Blank Spikes (Check all that apply)....

☐

☒

✓ LCS %R 80-120%, [50-150% for Ag, Sb]
⊗ LCS %R 50-79% or $> 120\%$, results $> IDL$ estimated (J)
⊗ LCS %R 50-79% and results $< IDL$ estimated (UJ)
____ LCS %R $< 50\%$ and all results rejected (R/UR)

Comments/Qualified Results:

6010 = LCS 177/16A ⊗ N2 recovery (J/UJ) All Supls.
Batch 50241

177/17-A 6020 : Batch 50224 ✓, 50177 ✓, 50182 ✓, MS ✓

Hg # 49654 ✓ MS ✓

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

8. Spike Recovery (Check all that apply).....



- ☐ Spike %R with 75-125%
- ☐ Spike %R 30-74%, >125%, results > IDL est. (J)
- ☐ Spike %R 30-74% results <IDL estimated (UJ)

- ☐ Spike %R <30%, results <IDL rejected (UR)
- ☐ Field blanks used for spike analysis
- ☐ Post digest spk reqd: %R 75-125%, except Ag

Comments/Qualified Results: See section (7). No Quals.

9. GFAA Performance, MSA, or Serial Dilutions.....



- ☐ Duplicate injection RSD <20%
- ☐ Duplicate injection RSD >20%, results > CRDL estimated (J)
- ☐ Analytical spike %R 85-115%
- ☐ Analytical spike %R 40-85%, results > IDL estimated (J)
- ☐ Analytical spike %R 10-40%, results <IDL estimated (UJ)
- ☐ Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results: Serial Dilution on Sample -01 qualify
Fe, Al, Co, Zn assoc. results Qual. (J/UJ).
Sample -13 qualify Fe, Mg, Al, Cu, Ni, Zn (J/UJ)

10. Detection Limits, Other QC.....



Comments/Qualified Results: ICD - ✓

Ag @ 1mg/Kg for RL does not meet Reg Screen Level.
Fe @ 10 " " " " " " " " " "

11. Data Verification and Overall Assessment.....



Comments/Qualified Results: _____

Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/01/09 10:07
Redmond, WA 98077	Project Manager: Doug Morell	

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

SSH0168-01 (GTP1-10.5-082709)		Soil					Sampled: 08/27/09 09:40			
Calcium	6010B TMP Dry	1600	2.0	72	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 21:38	
Iron	"	15000	0.61	13	"	"	"	"	"	B
Magnesium	"	5700	0.87	72	"	"	"	"	"	B
Potassium	"	1400	21	220	"	"	"	"	"	
Silver	"	ND	0.059	1.3	"	"	"	"	"	
Sodium	"	ND	8.9	130	"	"	"	"	"	

SSH0168-02 (GTP1-13.5-082709)		Soil					Sampled: 08/27/09 10:10			
Calcium	6010B TMP Dry	1500	1.5	57	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:06	
Iron	"	13000	0.48	10	"	"	"	"	"	B
Magnesium	"	3900	0.68	57	"	"	"	"	"	B
Potassium	"	1200	17	170	"	"	"	"	"	
Silver	"	ND	0.046	1.0	"	"	"	"	"	
Sodium	"	ND	7.0	100	"	"	"	"	"	

SSH0168-03 (GTP3-3.5-082709)		Soil					Sampled: 08/27/09 14:15			
Calcium	6010B TMP Dry	5200	1.6	58	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:10	
Iron	"	15000	0.49	11	"	"	"	"	"	B
Magnesium	"	9600	0.70	58	"	"	"	"	"	B
Potassium	"	2900	17	170	"	"	"	"	"	
Silver	"	ND	0.047	1.1	"	"	"	"	"	
Sodium	"	ND	7.2	110	"	"	"	"	"	

SSH0168-04 (GTP3-5-082709)		Soil					Sampled: 08/27/09 14:35			
Calcium	6010B TMP Dry	5300	1.9	71	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:14	
Iron	"	12000	0.59	13	"	"	"	"	"	B
Magnesium	"	5300	0.85	71	"	"	"	"	"	B
Potassium	"	2100	21	210	"	"	"	"	"	
Silver	"	ND	0.058	1.3	"	"	"	"	"	
Sodium	"	ND	8.8	130	"	"	"	"	"	

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Metals (ICP)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
Calcium	6010B TMP Dry	1800	1.9	68	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:17	
Iron	"	20000	0.57	12	"	"	"	"	"	B
Magnesium	"	6100	0.82	68	"	"	"	"	"	B
Potassium	"	2800	20	200	"	"	"	"	"	
Silver	"	ND	0.056	1.2	"	"	"	"	"	
Sodium	"	ND	8.4	120	"	"	"	"	"	
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
Calcium	6010B TMP Dry	2500	1.5	55	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:21	
Iron	"	14000	0.46	10	"	"	"	"	"	B
Magnesium	"	3300	0.66	55	"	"	"	"	"	B
Potassium	"	1200	16	170	"	"	"	"	"	
Silver	"	ND	0.045	1.0	"	"	"	"	"	
Sodium	"	ND	6.8	100	"	"	"	"	"	
SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
Calcium	6010B TMP Dry	900	1.6	59	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:25	
Iron	"	12000	0.49	11	"	"	"	"	"	B
Magnesium	"	3200	0.71	59	"	"	"	"	"	B
Potassium	"	1100	17	180	"	"	"	"	"	
Silver	"	ND	0.048	1.1	"	"	"	"	"	
Sodium	"	ND	7.3	110	"	"	"	"	"	
SSH0168-09 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
Calcium	6010B TMP Dry	2700	1.6	57	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:29	
Iron	"	18000	0.48	10	"	"	"	"	"	B
Magnesium	"	4400	0.69	57	"	"	"	"	"	B
Potassium	"	1600	17	170	"	"	"	"	"	
Silver	"	ND	0.047	1.0	"	"	"	"	"	
Sodium	"	ND	7.1	100	"	"	"	"	"	

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
Calcium	6010B TMP Dry	5900	3.1	110	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:32	
Iron	"	7800	0.96	21	"	"	"	"	"	B
Magnesium	"	2800	1.4	110	"	"	"	"	"	B
Potassium	"	1700	33	340	"	"	"	"	"	
Silver	"	ND	0.093	2.1	"	"	"	"	"	
Sodium	"	ND	14	210	"	"	"	"	"	
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
Calcium	6010B TMP Dry	2800	2.4	88	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:36	
Iron	"	9500	0.73	16	"	"	"	"	"	B
Magnesium	"	2700	1.1	88	"	"	"	"	"	B
Potassium	"	1500	26	260	"	"	"	"	"	
Silver	"	ND	0.072	1.6	"	"	"	"	"	
Sodium	"	ND	11	160	"	"	"	"	"	
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
Calcium	6010B TMP Dry	5400	1.6	60	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:53	
Iron	"	18000	0.50	11	"	"	"	"	"	B
Magnesium	"	3500	0.72	60	"	"	"	"	"	B
Potassium	"	1400	17	180	"	"	"	"	"	
Silver	"	ND	0.049	1.1	"	"	"	"	"	
Sodium	"	ND	7.4	110	"	"	"	"	"	
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
Calcium	6010B TMP Dry	2100	2.1	76	mg/Kg dry	1x	50177	09/14/09 11:16	09/14/09 22:57	
Iron	"	12000	0.64	14	"	"	"	"	"	B
Magnesium	"	3500	0.91	76	"	"	"	"	"	B
Potassium	"	1200	22	230	"	"	"	"	"	
Silver	"	ND	0.062	1.4	"	"	"	"	"	
Sodium	"	ND	9.4	140	"	"	"	"	"	

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
Calcium	6010B TMP Dry	25000	1.5	56	mg/Kg dry	1x	50182	09/14/09 11:44	09/14/09 23:29	
Iron	"	16000	0.47	10	"	"	"	"	"	
Magnesium	"	6300	0.67	56	"	"	"	"	"	
Potassium	"	1200	16	170	"	"	"	"	"	
Silver	"	ND	0.046	1.0	"	"	"	"	"	
Sodium	"	ND	6.9	100	"	"	"	"	"	
SSH0168-15 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
Calcium	6010B TMP Dry	2000	1.5	55	mg/Kg dry	1x	50182	09/14/09 11:44	09/14/09 23:57	
Iron	"	11000	0.46	10	"	"	"	"	"	
Magnesium	"	3100	0.67	55	"	"	"	"	"	
Potassium	"	1200	16	170	"	"	"	"	"	
Silver	"	ND	0.045	1.0	"	"	"	"	"	
Sodium	"	ND	6.9	100	"	"	"	"	"	
SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
Calcium	6010B TMP Dry	1300	1.6	58	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:00	
Iron	"	12000	0.48	11	"	"	"	"	"	
Magnesium	"	3500	0.69	58	"	"	"	"	"	
Potassium	"	1400	17	170	"	"	"	"	"	
Silver	"	ND	0.047	1.1	"	"	"	"	"	
Sodium	"	ND	7.2	110	"	"	"	"	"	
SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
Calcium	6010B TMP Dry	6400	1.8	65	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:04	
Iron	"	16000	0.54	12	"	"	"	"	"	
Magnesium	"	4300	0.78	65	"	"	"	"	"	
Potassium	"	1900	19	190	"	"	"	"	"	
Silver	"	ND	0.053	1.2	"	"	"	"	"	
Sodium	"	43	8.0	120	"	"	"	"	"	

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
Calcium	6010B TMP Dry	2100	1.7	62	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:08	
Iron	"	16000	0.52	11	"	"	"	"	"	
Magnesium	"	8800	0.74	62	"	"	"	"	"	
Potassium	"	3200	18	190	"	"	"	"	"	
Silver	"	ND	0.051	1.1	"	"	"	"	"	
Sodium	"	ND <i>UJ</i>	7.6	110	"	"	"	"	"	
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
Calcium	6010B TMP Dry	1500	1.9	68	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:12	
Iron	"	13000	0.57	12	"	"	"	"	"	
Magnesium	"	4600	0.82	68	"	"	"	"	"	
Potassium	"	1600	20	200	"	"	"	"	"	
Silver	"	ND	0.056	1.2	"	"	"	"	"	
Sodium	"	ND <i>UJ</i>	8.4	120	"	"	"	"	"	
SSH0168-20 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
Calcium	6010B TMP Dry	8800	1.7	62	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:16	
Iron	"	13000	0.52	11	"	"	"	"	"	
Magnesium	"	2700	0.74	62	"	"	"	"	"	
Potassium	"	780	18	190	"	"	"	"	"	
Silver	"	ND	0.051	1.1	"	"	"	"	"	
Sodium	"	170 <i>J</i>	7.6	110	"	"	"	"	"	
SSH0168-21 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
Calcium	6010B TMP Dry	3200	1.6	60	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:19	
Iron	"	9000	0.51	11	"	"	"	"	"	
Magnesium	"	2900	0.73	60	"	"	"	"	"	
Potassium	"	660	18	180	"	"	"	"	"	
Silver	"	ND	0.049	1.1	"	"	"	"	"	
Sodium	"	ND <i>UJ</i>	7.5	110	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc. 18300 NE Union Hill Rd. Suite 200 Redmond, WA 98077	Project Name: Avery Landing Project Number: 073-93312-03 Project Manager: Doug Morell	Report Created: 10/01/09 10:07
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Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
Calcium	6010B TMP Dry	1500	1.7	63	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:23	
Iron	"	13000	0.53	12	"	"	"	"	"	
Magnesium	"	5000	0.76	63	"	"	"	"	"	
Potassium	"	1700	18	190	"	"	"	"	"	
Silver	"	ND	0.052	1.2	"	"	"	"	"	
Sodium	"	ND <i>UT</i>	7.8	120	"	"	"	"	"	
SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
Calcium	6010B TMP Dry	1300	1.6	58	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:27	
Iron	"	12000	0.48	10	"	"	"	"	"	
Magnesium	"	4500	0.69	58	"	"	"	"	"	
Potassium	"	1200	17	170	"	"	"	"	"	
Silver	"	ND	0.047	1.0	"	"	"	"	"	
Sodium	"	ND <i>UT</i>	7.1	100	"	"	"	"	"	
SSH0168-24 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
Calcium	6010B TMP Dry	1100	1.6	57	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:44	
Iron	"	12000	0.48	10	"	"	"	"	"	
Magnesium	"	3900	0.68	57	"	"	"	"	"	
Potassium	"	1200	17	170	"	"	"	"	"	
Silver	"	ND	0.047	1.0	"	"	"	"	"	
Sodium	"	ND <i>UT</i>	7.0	100	"	"	"	"	"	
SSH0168-25 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
Calcium	6010B TMP Dry	3600	1.6	58	mg/Kg dry	1x	50182	09/14/09 11:44	09/15/09 00:47	
Iron	"	19000	0.48	11	"	"	"	"	"	
Magnesium	"	3300	0.69	58	"	"	"	"	"	
Potassium	"	1500	17	170	"	"	"	"	"	
Silver	"	ND	0.047	1.1	"	"	"	"	"	
Sodium	"	ND <i>UT</i>	7.2	110	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil		Sampled: 08/27/09 09:40						
Mercury	7471A Dry	0.015 J	0.0081	0.026	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 15:40	J
SSH0168-02 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
Mercury	7471A Dry	0.013 J	0.0065	0.021	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:02	J
SSH0168-03 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
Mercury	7471A Dry	0.018 J	0.0061	0.019	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:06	J
SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
Mercury	7471A Dry	0.11	0.0078	0.025	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:10	
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
Mercury	7471A Dry	ND	0.0081	0.026	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:15	
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
Mercury	7471A Dry	0.016 J	0.0063	0.020	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:20	J
SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
Mercury	7471A Dry	0.012 J	0.0061	0.019	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:32	J
SSH0168-09 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
Mercury	7471A Dry	0.025	0.0065	0.021	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:36	
SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
Mercury	7471A Dry	ND	0.013	0.040	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:41	
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
Mercury	7471A Dry	0.023 J	0.0096	0.030	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:45	J
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
Mercury	7471A Dry	0.018 J	0.0066	0.021	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:49	J

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Goldier Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
Mercury	7471A Dry	0.017 J	0.0088	0.028	mg/Kg dry	1x	49654	09/03/09 13:44	09/03/09 16:53	J
SSH0168-14 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
Mercury	7471A Dry	0.013 J	0.0063	0.020	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 17:32	J
SSH0168-15 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
Mercury	7471A Dry	0.017 J	0.0062	0.020	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 17:53	J
SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
Mercury	7471A Dry	0.015 J	0.0061	0.019	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 17:57	J
SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
Mercury	7471A Dry	0.027	0.0077	0.024	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:01	
SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
Mercury	7471A Dry	0.024	0.0071	0.023	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:06	
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
Mercury	7471A Dry	ND	0.0077	0.024	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:10	
SSH0168-20 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
Mercury	7471A Dry	0.0083 J	0.0069	0.022	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:25	J
SSH0168-21 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
Mercury	7471A Dry	0.014 J	0.0068	0.022	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:29	J
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
Mercury	7471A Dry	ND	0.0071	0.023	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:33	
SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
Mercury	7471A Dry	ND	0.0063	0.020	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:38	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc. 18300 NE Union Hill Rd. Suite 200 Redmond, WA 98077	Project Name: Avery Landing Project Number: 073-93312-03 Project Manager: Doug Morell	Report Created: 10/01/09 10:07
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Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24 (TS-COMP-3)		Soil						Sampled: 08/27/09 16:40		
Mercury	7471A Dry	0.016	0.0067	0.021	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:42	J
SSH0168-25 (GTP4-6.0-082709)		Soil						Sampled: 08/27/09 15:49		
Mercury	7471A Dry	0.022	0.0067	0.021	mg/Kg dry	1x	49657	09/03/09 14:24	09/03/09 18:46	



Goldier Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
Aluminum	6020 TMP Dry	11000	0.33	33	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:32	
Arsenic	"	17	0.00085	0.22	"	"	"	"	"	
Antimony	"	0.89	0.0072	0.22	"	"	"	"	"	B
Barium	"	78	0.0016	0.22	"	"	"	"	"	B
Beryllium	"	0.52	0.00075	0.22	"	"	"	"	"	B
Manganese	"	500	0.017	0.54	"	"	"	"	"	
Cadmium	"	0.34	0.00051	0.22	"	"	"	"	"	B
Nickel	"	18	0.0040	0.22	"	"	"	"	"	
Chromium	"	9.4	0.0043	0.22	"	"	"	"	"	
Selenium	"	0.11 J	0.0020	0.54	"	"	"	"	"	J
Cobalt	"	11	0.00059	0.22	"	"	"	"	"	B
Thallium	"	0.11	0.0043	0.43 U	"	"	"	"	"	J, B
Copper	"	26	0.0035	0.22	"	"	"	"	"	B
Vanadium	"	18	0.0029	0.22	"	"	"	"	"	B
Lead	"	11	0.0011	0.22	"	"	"	"	"	B
Zinc	"	28	0.016	0.76	"	"	"	"	"	

SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
Aluminum	6020 TMP Dry	7100 J	0.41	41	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:32	
Arsenic	"	8.3	0.0011	0.28	"	"	"	"	"	
Antimony	"	1.8	0.0091	0.28	"	"	"	"	"	B
Barium	"	54	0.0021	0.28	"	"	"	"	"	B
Beryllium	"	0.30	0.00095	0.28	"	"	"	"	"	B
Manganese	"	200	0.022	0.69	"	"	"	"	"	
Cadmium	"	0.29	0.00065	0.28	"	"	"	"	"	B
Nickel	"	12 J	0.0051	0.28	"	"	"	"	"	
Chromium	"	8.8	0.0055	0.28	"	"	"	"	"	
Selenium	"	0.10 J	0.0026	0.69	"	"	"	"	"	J
Cobalt	"	6.2	0.00075	0.28	"	"	"	"	"	B
Thallium	"	0.15	0.0055	0.55 U	"	"	"	"	"	J, B
Copper	"	50 J	0.0044	0.28	"	"	"	"	"	B
Vanadium	"	16	0.0037	0.28	"	"	"	"	"	B
Lead	"	34	0.0014	0.28	"	"	"	"	"	B
Zinc	"	46 J	0.021	0.97	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
Aluminum	6020 TMP Dry	6800	0.30	30	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 17:36	<i>Handwritten: B</i>
Arsenic	"	17	0.00079	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Antimony	"	0.97	0.0067	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Barium	"	47	0.0015	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Beryllium	"	0.36	0.00070	0.20	"	"	"	"	"	
Manganese	"	520	0.016	0.51	"	"	"	"	"	
Cadmium	"	0.13 <i>J</i>	0.00048	0.20	"	"	"	"	"	<i>Handwritten: J</i>
Nickel	"	17	0.0038	0.20	"	"	"	"	"	
Chromium	"	6.2	0.0041	0.20	"	"	"	"	"	
Selenium	"	0.068 <i>J</i>	0.0019	0.51	"	"	"	"	"	<i>Handwritten: J</i>
Cobalt	"	11	0.00053	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Thallium	"	0.14	0.0041	0.41	"	"	"	"	"	<i>Handwritten: B</i>
Copper	"	23	0.0032	0.20	"	"	"	"	"	
Vanadium	"	10	0.0027	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Lead	"	9.3	0.0010	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Zinc	"	26	0.015	0.71	"	"	"	"	"	

SSH0168-15 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
Aluminum	6020 TMP Dry	5500	0.30	30	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 18:41	<i>Handwritten: B</i>
Arsenic	"	6.8	0.00079	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Antimony	"	0.36	0.0067	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Barium	"	34	0.0015	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Beryllium	"	0.21	0.00070	0.20	"	"	"	"	"	
Manganese	"	270	0.016	0.50	"	"	"	"	"	
Cadmium	"	0.17 <i>J</i>	0.00047	0.20	"	"	"	"	"	<i>Handwritten: J</i>
Nickel	"	9.3	0.0037	0.20	"	"	"	"	"	
Chromium	"	7.3	0.0040	0.20	"	"	"	"	"	
Selenium	"	0.055 <i>J</i>	0.0019	0.50	"	"	"	"	"	<i>Handwritten: J</i>
Cobalt	"	6.1	0.00054	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Thallium	"	0.17	0.0040	0.40	"	"	"	"	"	<i>Handwritten: B</i>
Copper	"	20	0.0032	0.20	"	"	"	"	"	
Vanadium	"	12	0.0027	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Lead	"	7.4	0.0010	0.20	"	"	"	"	"	<i>Handwritten: B</i>
Zinc	"	28	0.015	0.71	"	"	"	"	"	

TestAmerica Spokane

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Handwritten: Rande Decker
Rande Decker, Project Manager



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
Aluminum	6020 TMP Dry	6200	0.32	32	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 18:48	<i>Handwritten: J</i>
Arsenic	"	7.8	0.00082	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Antimony	"	0.49	0.0069	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Barium	"	42	0.0016	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Beryllium	"	0.27	0.00073	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Manganese	"	200	0.017	0.53	"	"	"	"	"	<i>Handwritten: B</i>
Cadmium	"	0.11 <i>J</i>	0.00049	0.21	"	"	"	"	"	<i>Handwritten: J</i>
Nickel	"	9.9	0.0039	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Chromium	"	7.6	0.0042	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Selenium	"	0.073 <i>J</i>	0.0020	0.53	"	"	"	"	"	<i>Handwritten: J</i>
Cobalt	"	7.0	0.00057	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Thallium	"	0.18	0.0042	0.42 <i>u</i>	"	"	"	"	"	<i>Handwritten: B</i>
Copper	"	21	0.0034	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Vanadium	"	16	0.0028	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Lead	"	7.3	0.0011	0.21	"	"	"	"	"	<i>Handwritten: B</i>
Zinc	"	29	0.016	0.74	"	"	"	"	"	<i>Handwritten: B</i>

SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
Aluminum	6020 TMP Dry	14000	0.35	35	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 18:55	<i>Handwritten: J</i>
Arsenic	"	18	0.00092	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Antimony	"	2.1	0.0078	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Barium	"	240	0.0018	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Beryllium	"	1.0	0.00081	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Manganese	"	370	0.019	0.59	"	"	"	"	"	<i>Handwritten: B</i>
Cadmium	"	0.94	0.00056	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Nickel	"	17	0.0044	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Chromium	"	13	0.0047	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Selenium	"	0.36 <i>J</i>	0.0022	0.59	"	"	"	"	"	<i>Handwritten: J</i>
Cobalt	"	7.5	0.00064	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Thallium	"	0.28	0.0047	0.47 <i>u</i>	"	"	"	"	"	<i>Handwritten: B</i>
Copper	"	50	0.0038	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Vanadium	"	24	0.0032	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Lead	"	140	0.0012	0.24	"	"	"	"	"	<i>Handwritten: B</i>
Zinc	"	180	0.018	0.83	"	"	"	"	"	<i>Handwritten: B</i>

TestAmerica Spokane

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Handwritten: Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
Aluminum	6020 TMP Dry	15000	0.34	34	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 19:02	
Arsenic	"	32	0.00088	0.22	"	"	"	"	"	
Antimony	"	1.1	0.0074	0.22	"	"	"	"	"	
Barium	"	100	0.0017	0.22	"	"	"	"	"	
Beryllium	"	0.61	0.00078	0.22	"	"	"	"	"	
Manganese	"	490	0.018	0.56	"	"	"	"	"	
Cadmium	"	0.30	0.00053	0.22	"	"	"	"	"	
Nickel	"	15	0.0042	0.22	"	"	"	"	"	
Chromium	"	16	0.0045	0.22	"	"	"	"	"	
Selenium	"	0.094 J	0.0021	0.56	"	"	"	"	"	J
Cobalt	"	8.2	0.00061	0.22	"	"	"	"	"	
Thallium	"	0.24	0.0045	0.45 U	"	"	"	"	"	
Copper	"	19	0.0036	0.22	"	"	"	"	"	
Vanadium	"	24	0.0030	0.22	"	"	"	"	"	
Lead	"	22	0.0011	0.22	"	"	"	"	"	
Zinc	"	30	0.017	0.79	"	"	"	"	"	
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
Aluminum	6020 TMP Dry	9400	0.37	37	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 19:09	
Arsenic	"	21	0.00097	0.25	"	"	"	"	"	
Antimony	"	0.44	0.0062	0.25	"	"	"	"	"	
Barium	"	61	0.0019	0.25	"	"	"	"	"	
Beryllium	"	0.37	0.00085	0.25	"	"	"	"	"	
Manganese	"	370	0.020	0.62	"	"	"	"	"	
Cadmium	"	0.18 J	0.00058	0.25	"	"	"	"	"	J
Nickel	"	11	0.0046	0.25	"	"	"	"	"	
Chromium	"	11	0.0050	0.25	"	"	"	"	"	
Selenium	"	0.14 J	0.0023	0.62	"	"	"	"	"	J
Cobalt	"	6.5	0.00067	0.25	"	"	"	"	"	
Thallium	"	0.15	0.0050	0.50 U	"	"	"	"	"	
Copper	"	19	0.0040	0.25	"	"	"	"	"	
Vanadium	"	19	0.0033	0.25	"	"	"	"	"	
Lead	"	7.2	0.0012	0.25	"	"	"	"	"	
Zinc	"	31	0.019	0.87	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
Aluminum	6020 TMP Dry	8200	0.34	34	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 19:16	
Arsenic	"	8.0	0.00088	0.22	"	"	"	"	"	
Antimony	"	13	0.0074	0.22	"	"	"	"	"	
Barium	"	1100	0.0017	0.22	"	"	"	"	"	
Beryllium	"	1.1	0.00078	0.22	"	"	"	"	"	
Manganese	"	240	0.018	0.56	"	"	"	"	"	
Cadmium	"	0.42	0.00053	0.22	"	"	"	"	"	
Nickel	"	25	0.0042	0.22	"	"	"	"	"	
Chromium	"	8.6	0.0045	0.22	"	"	"	"	"	
Selenium	"	0.40 J	0.0021	0.56	"	"	"	"	"	J
Cobalt	"	7.6	0.00061	0.22	"	"	"	"	"	
Thallium	"	0.12	0.0043	0.45 U	"	"	"	"	"	
Copper	"	160	0.0036	0.22	"	"	"	"	"	
Vanadium	"	37	0.0030	0.22	"	"	"	"	"	
Lead	"	410	0.0011	0.22	"	"	"	"	"	
Zinc	"	70	0.017	0.79	"	"	"	"	"	

SSH0168-21 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
Aluminum	6020 TMP Dry	5100	0.33	33	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 19:45	
Arsenic	"	3.7	0.00086	0.22	"	"	"	"	"	
Antimony	"	1.9	0.0073	0.22	"	"	"	"	"	
Barium	"	27	0.0016	0.22	"	"	"	"	"	
Beryllium	"	0.25	0.00076	0.22	"	"	"	"	"	
Manganese	"	49	0.018	0.55	"	"	"	"	"	
Cadmium	"	0.19 J	0.00052	0.22	"	"	"	"	"	J
Nickel	"	16	0.0041	0.22	"	"	"	"	"	
Chromium	"	6.2	0.0044	0.22	"	"	"	"	"	
Selenium	"	0.11 J	0.0021	0.55	"	"	"	"	"	J
Cobalt	"	4.4	0.00059	0.22	"	"	"	"	"	
Thallium	"	0.13	0.0044	0.44 U	"	"	"	"	"	
Copper	"	70	0.0035	0.22	"	"	"	"	"	
Vanadium	"	18	0.0030	0.22	"	"	"	"	"	
Lead	"	41	0.0011	0.22	"	"	"	"	"	
Zinc	"	65	0.016	0.77	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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Golden Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
Aluminum	6020 TMP Dry	9000	0.35	35	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 19:52	<i>TS</i>
Arsenic	"	9.0	0.00090	0.23	"	"	"	"	"	<i>B</i>
Antimony	"	0.80	0.0076	0.23	"	"	"	"	"	<i>B</i>
Barium	"	90	0.0017	0.23	"	"	"	"	"	<i>B</i>
Beryllium	"	0.35	0.00080	0.23	"	"	"	"	"	
Manganese	"	170	0.018	0.58	"	"	"	"	"	
Cadmium	"	0.16 <i>J</i>	0.00054	0.23	"	"	"	"	"	<i>J</i>
Nickel	"	13	0.0043	0.23	"	"	"	"	"	
Chromium	"	9.9	0.0046	0.23	"	"	"	"	"	
Selenium	"	0.16 <i>J</i>	0.0022	0.58	"	"	"	"	"	<i>J</i>
Cobalt	"	8.0	0.00062	0.23	"	"	"	"	"	<i>B</i>
Thallium	"	0.20	0.0046	0.46 <i>u</i>	"	"	"	"	"	<i>LB</i>
Copper	"	25	0.0037	0.23	"	"	"	"	"	
Vanadium	"	23	0.0031	0.23	"	"	"	"	"	<i>B</i>
Lead	"	12	0.0012	0.23	"	"	"	"	"	<i>B</i>
Zinc	"	36	0.017	0.81	"	"	"	"	"	

SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
Aluminum	6020 TMP Dry	9200	0.31	31	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 19:59	<i>TS</i>
Arsenic	"	7.8	0.00082	0.21	"	"	"	"	"	<i>B</i>
Antimony	"	1.4	0.0069	0.21	"	"	"	"	"	<i>B</i>
Barium	"	90	0.0016	0.21	"	"	"	"	"	
Beryllium	"	0.38	0.00072	0.21	"	"	"	"	"	
Manganese	"	160	0.017	0.52	"	"	"	"	"	
Cadmium	"	0.14 <i>J</i>	0.00049	0.21	"	"	"	"	"	<i>J</i>
Nickel	"	13	0.0039	0.21	"	"	"	"	"	
Chromium	"	9.8	0.0042	0.21	"	"	"	"	"	
Selenium	"	0.14 <i>J</i>	0.0020	0.52	"	"	"	"	"	<i>J</i>
Cobalt	"	7.8	0.00057	0.21	"	"	"	"	"	<i>B</i>
Thallium	"	0.18	0.0042	0.42 <i>u</i>	"	"	"	"	"	<i>LB</i>
Copper	"	45	0.0034	0.21	"	"	"	"	"	
Vanadium	"	21	0.0028	0.21	"	"	"	"	"	<i>B</i>
Lead	"	19	0.0010	0.21	"	"	"	"	"	<i>B</i>
Zinc	"	30	0.016	0.73	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
Aluminum	6020 TMP Dry	6500	0.31	31	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 20:06	<i>JB</i>
Arsenic	"	15	0.00081	0.21	"	"	"	"	"	<i>B</i>
Antimony	"	1.2	0.0068	0.21	"	"	"	"	"	<i>B</i>
Barium	"	40	0.0016	0.21	"	"	"	"	"	<i>B</i>
Beryllium	"	0.29	0.00071	0.21	"	"	"	"	"	
Manganese	"	170	0.017	0.52	"	"	"	"	"	
Cadmium	"	0.13 <i>J</i>	0.00049	0.21	"	"	"	"	"	<i>J</i>
Nickel	"	12	0.0038	0.21	"	"	"	"	"	
Chromium	"	7.4	0.0041	0.21	"	"	"	"	"	
Selenium	"	0.13 <i>J</i>	0.0019	0.52	"	"	"	"	"	<i>J</i>
Cobalt	"	7.9	0.00056	0.21	"	"	"	"	"	<i>B</i>
Thallium	"	0.11	0.0041	0.41 <i>U</i>	"	"	"	"	"	<i>J-B</i>
Copper	"	23	0.0033	0.21	"	"	"	"	"	
Vanadium	"	17	0.0028	0.21	"	"	"	"	"	<i>B</i>
Lead	"	15	0.0010	0.21	"	"	"	"	"	<i>B</i>
Zinc	"	23	0.016	0.72	"	"	"	"	"	
SSH0168-25 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
Aluminum	6020 TMP Dry	14000	0.32	32	mg/Kg dry	10x	50182	09/14/09 11:44	09/14/09 20:14	<i>JB</i>
Arsenic	"	28	0.00082	0.21	"	"	"	"	"	<i>B</i>
Antimony	"	1.6	0.0069	0.21	"	"	"	"	"	<i>B</i>
Barium	"	130	0.0016	0.21	"	"	"	"	"	<i>B</i>
Beryllium	"	0.81	0.00073	0.21	"	"	"	"	"	
Manganese	"	500	0.017	0.53	"	"	"	"	"	
Cadmium	"	0.61	0.00049	0.21	"	"	"	"	"	
Nickel	"	25	0.0039	0.21	"	"	"	"	"	
Chromium	"	14	0.0042	0.21	"	"	"	"	"	
Selenium	"	0.19 <i>J</i>	0.0020	0.53	"	"	"	"	"	<i>J</i>
Cobalt	"	11	0.00057	0.21	"	"	"	"	"	<i>B</i>
Thallium	"	0.11	0.0042	0.42 <i>U</i>	"	"	"	"	"	<i>J-B</i>
Copper	"	63	0.0034	0.21	"	"	"	"	"	
Vanadium	"	29	0.0028	0.21	"	"	"	"	"	<i>B</i>
Lead	"	55	0.0011	0.21	"	"	"	"	"	<i>B</i>
Zinc	"	90	0.016	0.74	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil		Sampled: 08/27/09 09:40						
Aluminum	6020 TMP Dry	10000	J 0.39	39	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 14:41	
Arsenic	"	5.7	0.0010	0.26	"	"	"	"	"	
Antimony	"	0.45	0.0087	0.26	"	"	"	"	"	B
Barium	"	76	0.0020	0.26	"	"	"	"	"	B
Beryllium	"	0.37	0.00091	0.26	"	"	"	"	"	B
Manganese	"	130	0.021	0.66	"	"	"	"	"	
Cadmium	"	0.18	0.00062	0.26	U	"	"	"	"	J-B
Nickel	"	13	0.0049	0.26	"	"	"	"	"	
Chromium	"	11	0.0053	0.26	"	"	"	"	"	
Selenium	"	0.19	J 0.0025	0.66	"	"	"	"	"	J
Cobalt	"	6.8	J 0.00071	0.26	"	"	"	"	"	B
Thallium	"	0.16	0.0053	0.53	U	"	"	"	"	J-B
Copper	"	18	0.0042	0.26	"	"	"	"	"	B
Vanadium	"	26	0.0036	0.26	"	"	"	"	"	B
Lead	"	8.4	0.0013	0.26	"	"	"	"	"	B
Zinc	"	34	J 0.020	0.92	"	"	"	"	"	

SSH0168-02 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
Aluminum	6020 TMP Dry	6800	0.31	31	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 15:36	
Arsenic	"	11	0.00081	0.21	"	"	"	"	"	
Antimony	"	1.3	0.0068	0.21	"	"	"	"	"	B
Barium	"	64	0.0015	0.21	"	"	"	"	"	B
Beryllium	"	0.29	0.00071	0.21	"	"	"	"	"	B
Manganese	"	140	0.017	0.52	"	"	"	"	"	
Cadmium	"	0.18	0.00049	0.21	U	"	"	"	"	J-B
Nickel	"	12	0.0038	0.21	"	"	"	"	"	
Chromium	"	7.6	0.0041	0.21	"	"	"	"	"	
Selenium	"	0.20	J 0.0019	0.52	"	"	"	"	"	J
Cobalt	"	8.9	0.00056	0.21	"	"	"	"	"	B
Thallium	"	0.21	0.0041	0.41	U	"	"	"	"	J-B
Copper	"	31	0.0033	0.21	"	"	"	"	"	B
Vanadium	"	18	0.0028	0.21	"	"	"	"	"	B
Lead	"	16	0.0010	0.21	"	"	"	"	"	B
Zinc	"	25	0.015	0.72	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-03 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
Aluminum	6020 TMP Dry	13000	0.32	32	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 15:42	
Arsenic	"	8.5	0.0082	0.21	"	"	"	"	"	
Antimony	"	0.85	0.0070	0.21	"	"	"	"	"	
Barium	"	88	0.0016	0.21	"	"	"	"	"	
Beryllium	"	0.82	0.00073	0.21	"	"	"	"	"	
Manganese	"	520	0.017	0.53	"	"	"	"	"	
Cadmium	"	0.27	0.00050	0.21	"	"	"	"	"	
Nickel	"	13	0.0039	0.21	"	"	"	"	"	
Chromium	"	12	0.0042	0.21	"	"	"	"	"	
Selenium	"	0.10	0.0020	0.53	"	"	"	"	"	
Cobalt	"	8.7	0.00057	0.21	"	"	"	"	"	
Thallium	"	0.23	0.0042	0.42	"	"	"	"	"	
Copper	"	23	0.0034	0.21	"	"	"	"	"	
Vanadium	"	19	0.0028	0.21	"	"	"	"	"	
Lead	"	20	0.0011	0.21	"	"	"	"	"	
Zinc	"	72	0.016	0.74	"	"	"	"	"	

SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
Aluminum	6020 TMP Dry	9200	0.39	39	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 15:48	
Arsenic	"	8.9	0.0010	0.26	"	"	"	"	"	
Antimony	"	1.1	0.0085	0.26	"	"	"	"	"	
Barium	"	180	0.0019	0.26	"	"	"	"	"	
Beryllium	"	0.51	0.00089	0.26	"	"	"	"	"	
Manganese	"	400	0.021	0.64	"	"	"	"	"	
Cadmium	"	0.28	0.00060	0.26	"	"	"	"	"	
Nickel	"	13	0.0048	0.26	"	"	"	"	"	
Chromium	"	10	0.0051	0.26	"	"	"	"	"	
Selenium	"	0.16	0.0024	0.64	"	"	"	"	"	
Cobalt	"	5.9	0.00070	0.26	"	"	"	"	"	
Thallium	"	0.20	0.0051	0.51	"	"	"	"	"	
Copper	"	31	0.0041	0.26	"	"	"	"	"	
Vanadium	"	19	0.0035	0.26	"	"	"	"	"	
Lead	"	44	0.0013	0.26	"	"	"	"	"	
Zinc	"	73	0.019	0.90	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
Aluminum	6020 TMP Dry	16000	0.37	37	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 15:54	
Arsenic	"	45	0.00097	0.25	"	"	"	"	"	
Antimony	"	0.87	0.0082	0.25	"	"	"	"	"	
Barium	"	110	0.0019	0.25	"	"	"	"	"	
Beryllium	"	0.75	0.00085	0.25	"	"	"	"	"	
Manganese	"	560	0.020	0.62	"	"	"	"	"	
Cadmium	"	0.32	0.00058	0.25	"	"	"	"	"	
Nickel	"	19	0.0016	0.25	"	"	"	"	"	
Chromium	"	18	0.0049	0.25	"	"	"	"	"	
Selenium	"	0.15 J	0.0023	0.62	"	"	"	"	"	J
Cobalt	"	12	0.00067	0.25	"	"	"	"	"	
Thallium	"	0.25	0.0049	0.49 U	"	"	"	"	"	
Copper	"	29	0.0040	0.25	"	"	"	"	"	
Vanadium	"	34	0.0033	0.25	"	"	"	"	"	
Lead	"	11	0.0012	0.25	"	"	"	"	"	
Zinc	"	40	0.019	0.87	"	"	"	"	"	

SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
Aluminum	6020 TMP Dry	9100	0.30	30	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:00	
Arsenic	"	20	0.00078	0.20	"	"	"	"	"	
Antimony	"	1.3	0.0066	0.20	"	"	"	"	"	
Barium	"	87	0.0015	0.20	"	"	"	"	"	
Beryllium	"	0.45	0.00069	0.20	"	"	"	"	"	
Manganese	"	320	0.016	0.50	"	"	"	"	"	
Cadmium	"	0.34	0.00047	0.20	"	"	"	"	"	
Nickel	"	14	0.0037	0.20	"	"	"	"	"	
Chromium	"	11	0.0040	0.20	"	"	"	"	"	
Selenium	"	0.16 J	0.0019	0.50	"	"	"	"	"	J
Cobalt	"	9.2	0.00054	0.20	"	"	"	"	"	
Thallium	"	0.15	0.0040	0.40 U	"	"	"	"	"	
Copper	"	49	0.0032	0.20	"	"	"	"	"	
Vanadium	"	18	0.0027	0.20	"	"	"	"	"	
Lead	"	53	0.0010	0.20	"	"	"	"	"	
Zinc	"	66	0.015	0.70	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-S.0-082709)		Soil		Sampled: 08/27/09 15:59						
Aluminum	6020 TMP Dry	6000	0.32	32	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:07	
Arsenic	"	9.4	0.00084	0.22	"	"	"	"	"	
Antimony	"	0.62	0.0071	0.22	"	"	"	"	"	
Barium	"	39	0.0016	0.22	"	"	"	"	"	
Beryllium	"	0.20	0.00074	0.22	u	"	"	"	"	
Manganese	"	260	0.017	0.54	"	"	"	"	"	
Cadmium	"	0.15	0.00051	0.22	u	"	"	"	"	
Nickel	"	11	0.0040	0.22	"	"	"	"	"	
Chromium	"	7.2	0.0043	0.22	"	"	"	"	"	
Selenium	"	0.063	0.0020	0.54	"	"	"	"	"	
Cobalt	"	5.1	0.00058	0.22	"	"	"	"	"	
Thallium	"	0.12	0.0043	0.43	u	"	"	"	"	
Copper	"	27	0.0034	0.22	"	"	"	"	"	
Vanadium	"	13	0.0029	0.22	"	"	"	"	"	
Lead	"	21	0.0011	0.22	"	"	"	"	"	
Zinc	"	57	0.016	0.75	"	"	"	"	"	

SSH0168-09 (GTP5-S.0-082709)		Soil		Sampled: 08/27/09 16:40						
Aluminum	6020 TMP Dry	10000	0.31	31	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:13	
Arsenic	"	15	0.00081	0.21	"	"	"	"	"	
Antimony	"	1.5	0.0069	0.21	"	"	"	"	"	
Barium	"	63	0.0016	0.21	"	"	"	"	"	
Beryllium	"	0.55	0.00072	0.21	"	"	"	"	"	
Manganese	"	540	0.017	0.52	"	"	"	"	"	
Cadmium	"	0.31	0.00049	0.21	"	"	"	"	"	
Nickel	"	17	0.0039	0.21	"	"	"	"	"	
Chromium	"	8.3	0.0042	0.21	"	"	"	"	"	
Selenium	"	0.13	0.0020	0.52	"	"	"	"	"	
Cobalt	"	12	0.00056	0.21	"	"	"	"	"	
Thallium	"	0.17	0.0042	0.42	u	"	"	"	"	
Copper	"	22	0.0033	0.21	"	"	"	"	"	
Vanadium	"	16	0.0028	0.21	"	"	"	"	"	
Lead	"	9.3	0.0010	0.21	"	"	"	"	"	
Zinc	"	27	0.016	0.73	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Metals (ICP/MS)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
Aluminum	6020 TMP Dry	6300	0.62	62	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:19	
Arsenic	"	3.6	0.0016	0.42	"	"	"	"	"	
Antimony	"	0.35	0.014	0.42	u	"	"	"	"	J-B
Barium	"	150	0.0031	0.42	"	"	"	"	"	B
Beryllium	"	0.21	0.0014	0.42	u	"	"	"	"	J-B
Manganese	"	330	0.033	1.0	"	"	"	"	"	
Cadmium	"	0.21	0.00098	0.42	u	"	"	"	"	J-B
Nickel	"	6.7	0.0077	0.42	"	"	"	"	"	
Chromium	"	5.3	0.0083	0.42	"	"	"	"	"	
Selenium	"	0.063	0.0039	1.0	"	"	"	"	"	J
Cobalt	"	4.0	0.0011	0.42	"	"	"	"	"	B
Thallium	"	0.12	0.0083	0.83	u	"	"	"	"	J-B
Copper	"	16	0.0066	0.42	"	"	"	"	"	B
Vanadium	"	11	0.0056	0.42	"	"	"	"	"	B
Lead	"	7.4	0.0021	0.42	"	"	"	"	"	B
Zinc	"	49	0.031	1.5	"	"	"	"	"	

SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
Aluminum	6020 TMP Dry	6100	0.48	48	mg/Kg dry	10x	50177	09/14/09 11:16	09/14/09 16:25	
Arsenic	"	4.7	0.0012	0.32	"	"	"	"	"	
Antimony	"	0.64	0.011	0.32	"	"	"	"	"	B
Barium	"	89	0.0024	0.32	"	"	"	"	"	B
Beryllium	"	0.20	0.0011	0.32	u	"	"	"	"	J-B
Manganese	"	200	0.026	0.80	"	"	"	"	"	
Cadmium	"	0.20	0.00075	0.32	u	"	"	"	"	J-B
Nickel	"	7.7	0.0059	0.32	"	"	"	"	"	
Chromium	"	6.4	0.0064	0.32	"	"	"	"	"	
Selenium	"	0.023	0.0030	0.80	"	"	"	"	"	J
Cobalt	"	4.3	0.00086	0.32	"	"	"	"	"	B
Thallium	"	0.11	0.0064	0.64	u	"	"	"	"	J-B
Copper	"	17	0.0051	0.32	"	"	"	"	"	B
Vanadium	"	11	0.0043	0.32	"	"	"	"	"	B
Lead	"	34	0.0016	0.32	"	"	"	"	"	B
Zinc	"	37	0.024	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: SSH0168	
SAMPLES	Collect:	MATRIX	SOIL
24 Soils; See Summary Lab ID sheet attached.			
TEST PIT SOILS			

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA 8260	BNA 8270	Pest / PCB 8082	TPH-Dx	PAH- Sim	OTHER Moisture	OTHER
1. Data Completeness	○	○	○	○	○		
2. Preservation, Holding Times	○	○	○	○	○		
3. GC/MS Tune, Inst. Performance	○	○	○	○	○		
4. Calibrations	○	○	○	○	○		
5. Surrogates →	X ⁶	○	X ²	X ¹	○		
6. Internal Standards	○	○	○	○	X ³		
7. Lab Blanks, Field Blanks →	X ⁷	X ⁸	○	○	○		
8. Lab Duplicates, Field Duplicates	○	○	○	○	○		
9. LCS, Blank Spike, MS/MSD →	○	X ⁹	X ⁴	○	X ⁵		
10. Compound Identification, TICs	○	○	○	○	○		
11. Result Verification, D.Limits	○	○	○	○	○		
12. Overall Summary	○	○	○	○	○		

○ = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Sample # -21 qualif. results (J) due to 2 Surrog. out of limit. ② Both Surrog. ↓ for sample -09 all results qual. 'UJ' (PCB). ③ Samples for PAH -02 qualif. (J/R) #11, -24 qual. (J) for detects due to ↓ Internal Studs. ④ PCB sample #5 qualif. UJ for A-1016 and A-1260 only. ⑤ Fluorene on Smp1 -24 qualif. J due to MS ↓. ⑥ Smp1 -01 'UJ' applied to Assoc. Compnds due to ↓ BFB. ⑦ MeCl contamin. in prep. blank qualifies Select Samples w/ -* as (J) and other samples 'U'. ⑧ phthalate contaminants in prep. blank's affect sample 10 as estimated (J) and other samples 'U'. ⑨ Dim Nitrosophenylamine & Parabazole ↓ recovery qualifies assoc. results as J/UJ for samples tested on 9-14-09.

Validated by:

Reviewed by:

Date:

Date:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable:

YES NO

1. Date Package Completeness (Check if present).....

☐ ☐

Case narrative
Chain of Custody
Sample Results
Detection Limits
GC/MS Tuning
Initial Calibration
Continuing Calib.

Blank Results
Surrogate Results
Internal Standards
MS/MSD, LCS Results
Preparation Logs
Analysis Run Logs
Raw Data
Other

/ Acceptable
x Absent
o Not required for
data package
requested.

Comments/Qualified Results: VOA Blank MeCl₂ 10x = 0.0958 mg/kg

RL = 0.100 "

2. Holding Times (Check all that apply).....

☒ ☐

Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection

BNA samples extracted within 7 days (14 day soil) of collection

BNA extracts analyzed within 40 days of collection

Pest/PCBs samples extracted within 7 days (14 day soil) of collection

Pest/PCBs extracts analyzed within 40 days of collection

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results: See Summary H. Time sheet

* PCB analysis out of Hold according to DV guidelines
but citation from SW846 allows 1 year Hold period.
∴ NO QUALIF. Applied 12-16-09.

* Cite SW-846 Methods Update II, Chap. 4, Table 4-1, and
Method Update for 8082A.

3. GC Instrument Tune, Performance Check

☒ ☐

GC/MS Tuning performed

GC/MS Tuning within control limits

GC/MS Tuning out of control limits, (qualify R/UR)

Res Chk Mix, MidPoint AB <60%, (J for detects, UR other)

PEM resolution <90% adj pks, (J for detects, UR other)

DDT, Endrin breakdown >20%, (J for DDD, DDT, Endrin,

Endrin Aldehyde, Endrin Ketone, or NJ/R)

Res Check Mix, MidPoint AB, TCMX, DCBP within RT windows from ICAL AB mixture (Fix or R/UR)

Comments/Qualified Results:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

4. Initial & Continuing Calibration (Check all that apply)..... ☒ ☐

- GC/MS Data: ☐ Cal RRFs > 0.05 all cmpnds (If no, J/UR), [>0.01 for Poor Performers] VOA, SVOA
☐ Cal RSD of RRF < 30% all cmpnds (If no, J detects) [$<50\%$ for Poor Performers] VOA
☐ Cal RSD of RRF < 20.5% all cmpnds (If no, J detects) [$<50\%$ or $*30\%$ for Poor Performers] SVOA
 Note: *Applies to 2,4-DNT, 2-Nitrophenol, and 2,4-DMP only [SVOA].
☐ Continue Cal. +/- 30% Diff of RRF (If no, J/UJ) [+/- 50% Diff, Poor Performers] VOA, SVOA
☐ Continue Cal. %D < 25% all cmpnds (If no, J/UJ), VOA, SVOA
 Pesticide/PCB: ☐ RSD < 10% for performance checks (If no J detects)
☐ Stnds analyzed prior to analysis, & at proper frequency
☐ Continuing Cal. % Diff. < 15% for quant. (< 20% for confirm column)

Associated Calibrations for this SDG apply to other SDG for samples tested in the same analytical batches - NO Qualif. applied.

5. Surrogates (Check all that apply)..... ☐ ☒

- ☒ Surrogates analyzed
☐ Recoveries within Method Control (lab) limits (VOA: 80 - 120%, SVOA: Lab Established, PEST: 30-150%)
☐ Recoveries above Method Control limits (J detects only)
☐ Recoveries below Method Control limits but > 20% (J/UJ)
☐ Recoveries below 20%, 10% for PEST (J/UR for VOA, J/ UJ or UR for SVOA, J/UR for PEST)

Comments/Qualified Results: TPH-Dx 2-FBP for Smpl -01-11; p-Terphyn for Samples -10, -13 and Both for #21. Results qualif. (J) for -21 only.
PCB - Low for -02, -04, -11, -20, -23 & -24 single Surrog. only - No Qual.
Sample # -09 both + - Assoc. results qualif. (UJ). PAHs - 2 FBP for Smpls -01, -02, -11, -13, -17, -20 & -24 - No Qual. applied. VOA - BFB for Smpl. -01 assoc. NDS qualif. UJ. #17 TCE qualif. (J). SVOA Smpls diluted out Surrog. for -01, -02, -11, -17, -20, -21, -22, -23, -24 & -25. - NO QUAL.

6. Internal Standards Performance..... ☐ ☒

- ☒ Internal standards added to all QC and samples
☐ Internal standards areas within Control Limits* [+/- 40% VOA, +/- 50% SVOA]*
 *Associated with 12 Hour CCV Std.
☐ Internal standards out of Control limits but > 10% (J/UJ)
☐ Internal standards zero or < 10% of Control limits (J/UR)
☐ Internal standards RTs within +/- 20 sec window (If no, J/UJ)

Comments/Qualified Results: PAHs - Smpls -02 (J/R); # -11, -24 qualif. (J) for detects only. VOA ✓; SVOA ✓

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

7. Laboratory Blanks, Field Blanks (Check all that apply).....



- Method Blanks, Prep. Blanks analyzed after Cal Stnds and every 12 hours
- Method Blank Common Lab Contaminants, list: MeCl₂, Cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart
- Other Contaminants: Qualify results (< 5X RL) according to Chart below.
- Instrument blanks after all high level samples, All cmpnds must be <RL

Examples:

Comments/Qualified Results:

TPH-Dx 9/11 Batch 0006; 9/11
Batch 0027; 9/13 Batch; 9/16
Batch 0070

BLANK			SAMPLE	
MDL	Result	PQL	Result	Q Applied
0.3	0.45	1.0	0.8	1.0 U
0.3	0.99	1.0	1.8	1.8 J
0.3	1.5	1.0	1.1	1.5 U
0.3	1.5	1.0	1.8	1.8 J
0.3	0	1.0	0.85	0.85 J
0.3	0	1.0	1.8	1.8

PCB Batch 0048 9/11; #0086 9/16. PAH Batch 204 8/31; #0010 9/02
Batch #0042 9/14; #0060 9/14

VOA - MB 722/1A, -810/1A, 928/1A detects Bromometh MeCl₂ 9/09 1524
942/1A Detects affect Simps -02-01-03RE*, 04RE, 05RE, 06RE,
07RE, 09RE, 11RE*, 12RE, 13RE*, 14RE, 15RE, 16RE, 17RE*, 18RE*, 19RE, 20RE, 21RE.

<SECTION 12. For SVOA BLANKS>

8. Duplicate, Field Duplicates (Check all that apply).....



- Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
- Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
- Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results

9. MS/MSD, Lab Control Samples, Blank Spikes (Check all that apply)....



- LCS %R 80-120%
- LCS %R 50-79% or >120%, results >IDL estimated (J)
- LCS %R 50-79% and results <IDL estimated (UJ)
- LCS %R <50% and all results rejected (R/UR)

MS on select samples qualified

Comments/Qualified Results:

TPH-Dx Batch #0006, MS on 12, Batch #0027, MS non Assoc, Batch #0043 LCS, MS on #23 > 4x Spk - No Qual.
Batch #0070 LCS, MS on -024 > 4x Spk - No Qual. PCB-Batch #0018 LCS,
MS on -05 & recovery Qualifies #05 as (J/UJ). Batch #0086 LCS,
MS on -07. PAH Batch #1204, MS non-Assoc; Batch #0101 LCS,
MS non Assoc; Batch #0042 MS, MS on #06 recd; Batch #0060 LCS,
MS on #24 - Fluorene qualif. (J/UJ) on #24 only

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

10. Compound Identification, TICs..... ☐ ☐

Comments/Qualified Results: _____

11. Result Verification, Detection Limits ☐ ☒

All results supported in raw data

Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: PCB Lab RL @ 0.01 mg/Kg ✓ TPH-Dx ✓

⊗ PAH - Sample -20 does not meet Reg. Screen Level for Dibenzo (2h) Anthracene - NO QUAL. Advisory. Same for -21 & -23 also.

12. Overall Assessment..... ☐ ☐

Comments/Qualified Results: <SVOA BLANK> 9/14 diethylphthal, di-n-butylph, di-n-octylphthal detected: 10x = 0.0203, 0.059, 0.0038 respect.

(1) 9/15 - di-n-butylph 0.0919 = 10x 3 Affected samples -01, -03, -05, -06, -07, -08, -10*, -11, -12, -14, -15, -16 (18) (19).

<VOA-LCS> 9/04 ✓, 9/08 ✓, 9/09 ✓, 9/10 ✓ <SVOA-LCS> 9/14 n-Nitroso-diphenylam. & Carbazole & assoc results (J/US).

<VOA> - Chronic Blank Contamination found in Lab (Prep) Blanks and Field Blanks and associated samples. Validator deems all detects found on 9-09-09 analysis to be subject to Lab Contamination and 5 "U" qualifier is applied to all values < 1.0 mg/Kg-dry. 12-16-09.

Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Petroleum Products by NWTPH-Dx TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil		Sampled: 08/27/09 09:40						
Diesel Range Hydrocarbons	NWTPH-Dx	8670	—	316	mg/kg dry	10x	9090006	09/01/09 13:16	09/12/09 03:02	
Heavy Oil Range Hydrocarbons	"	12800	—	791	"	"	"	"	"	
Surrogate(s): 2-FBP		175%			50 - 150 %	"			"	23
p-Terphenyl-d14		99.7%			50 - 150 %	"			"	
SSH0168-02 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
Diesel Range Hydrocarbons	NWTPH-Dx	1630	—	229	mg/kg dry	10x	9090006	09/01/09 13:16	09/12/09 03:25	
Heavy Oil Range Hydrocarbons	"	2900	—	571	"	"	"	"	"	
Surrogate(s): 2-FBP		101%			50 - 150 %	"			"	
p-Terphenyl-d14		96.7%			50 - 150 %	"			"	
SSH0168-03 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
Diesel Range Hydrocarbons	NWTPH-Dx	44.2	—	10.8	mg/kg dry	1x	9090006	09/01/09 13:16	09/12/09 03:49	
Heavy Oil Range Hydrocarbons	"	209	—	26.9	"	"	"	"	"	
Surrogate(s): 2-FBP		93.8%			50 - 150 %	"			"	
p-Terphenyl-d14		111%			50 - 150 %	"			"	
SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
Diesel Range Hydrocarbons	NWTPH-Dx	770	—	69.2	mg/kg dry	5x	9090006	09/01/09 13:16	09/16/09 20:13	
Heavy Oil Range Hydrocarbons	"	999	—	173	"	"	"	"	"	
Surrogate(s): 2-FBP		75.2%			50 - 150 %	"			"	
p-Terphenyl-d14		117%			50 - 150 %	"			"	
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
Diesel Range Hydrocarbons	NWTPH-Dx	23.7	—	12.9	mg/kg dry	1x	9090006	09/01/09 13:16	09/16/09 12:14	
Heavy Oil Range Hydrocarbons	"	61.4	—	32.3	"	"	"	"	"	
Surrogate(s): 2-FBP		89.2%			50 - 150 %	"			"	
p-Terphenyl-d14		106%			50 - 150 %	"			"	
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
Diesel Range Hydrocarbons	NWTPH-Dx	25.6	—	10.5	mg/kg dry	1x	9090027	09/04/09 10:38	09/11/09 20:46	
Heavy Oil Range Hydrocarbons	"	145	—	26.4	"	"	"	"	"	
Surrogate(s): 2-FBP		94.0%			50 - 150 %	"			"	
p-Terphenyl-d14		101%			50 - 150 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Petroleum Products by NWTPH-Dx TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	16.1	mg/kg dry	1x	9090027	09/04/09 10:38	09/11/09 21:10	
Heavy Oil Range Hydrocarbons	"	ND	---	40.1	"	"	"	"	"	
Surrogate(s): 2-FBP		84.8%			50 - 150 %	"			"	
p-Terphenyl-d14		97.5%			50 - 150 %	"			"	
SSH0168-09 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	16.8	mg/kg dry	1x	9090027	09/04/09 10:38	09/11/09 21:33	
Heavy Oil Range Hydrocarbons	"	ND	---	41.9	"	"	"	"	"	
Surrogate(s): 2-FBP		90.1%			50 - 150 %	"			"	
p-Terphenyl-d14		105%			50 - 150 %	"			"	
SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
Diesel Range Hydrocarbons	NWTPH-Dx	774	---	31.0	mg/kg dry	1x	9090027	09/04/09 10:38	09/11/09 21:57	
Heavy Oil Range Hydrocarbons	"	1090	---	77.5	"	"	"	"	"	
Surrogate(s): 2-FBP		87.7%			50 - 150 %	"			"	
p-Terphenyl-d14		184%			50 - 150 %	"			"	ZK
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
Diesel Range Hydrocarbons	NWTPH-Dx	9660	---	471	mg/kg dry	20x	9090027	09/04/09 10:38	09/11/09 22:20	
Heavy Oil Range Hydrocarbons	"	3150	---	1180	"	"	"	"	"	
Surrogate(s): 2-FBP		453%			50 - 150 %	"			"	Z3
p-Terphenyl-d14		114%			50 - 150 %	"			"	
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	11.4	mg/kg dry	1x	9090027	09/04/09 10:38	09/11/09 22:44	
Heavy Oil Range Hydrocarbons	"	ND	---	28.4	"	"	"	"	"	
Surrogate(s): 2-FBP		86.9%			50 - 150 %	"			"	
p-Terphenyl-d14		102%			50 - 150 %	"			"	
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
Diesel Range Hydrocarbons	NWTPH-Dx	431	---	46.3	mg/kg dry	2x	9090027	09/04/09 10:38	09/11/09 23:07	
Heavy Oil Range Hydrocarbons	"	1200	---	116	"	"	"	"	"	
Surrogate(s): 2-FBP		90.7%			50 - 150 %	"			"	
p-Terphenyl-d14		259%			50 - 150 %	"			"	ZK

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Petroleum Products by NWTPH-Dx TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	15.8	mg/kg dry	1x	9090027	09/04/09 10:38	09/11/09 23:31	
Heavy Oil Range Hydrocarbons	"	42.2	—	39.5	"	"	"	"	"	
Surrogate(s): 2-FBP		89.1%			50 - 150 %	"			"	
p-Terphenyl-d14		107%			50 - 150 %	"			"	
SSH0168-15 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
Diesel Range Hydrocarbons	NWTPH-Dx	23.4	—	10.5	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 00:41	
Heavy Oil Range Hydrocarbons	"	182	—	26.2	"	"	"	"	"	
Surrogate(s): 2-FBP		88.2%			50 - 150 %	"			"	
p-Terphenyl-d14		98.2%			50 - 150 %	"			"	
SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	16.9	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 01:04	
Heavy Oil Range Hydrocarbons	"	ND	—	42.3	"	"	"	"	"	
Surrogate(s): 2-FBP		90.3%			50 - 150 %	"			"	
p-Terphenyl-d14		105%			50 - 150 %	"			"	
SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
Diesel Range Hydrocarbons	NWTPH-Dx	24.7	—	11.8	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 01:28	
Heavy Oil Range Hydrocarbons	"	252	—	29.4	"	"	"	"	"	
Surrogate(s): 2-FBP		91.7%			50 - 150 %	"			"	
p-Terphenyl-d14		99.8%			50 - 150 %	"			"	
SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.5	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 01:51	
Heavy Oil Range Hydrocarbons	"	ND	—	28.8	"	"	"	"	"	
Surrogate(s): 2-FBP		83.5%			50 - 150 %	"			"	
p-Terphenyl-d14		102%			50 - 150 %	"			"	
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	12.7	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 02:15	
Heavy Oil Range Hydrocarbons	"	ND	—	31.7	"	"	"	"	"	
Surrogate(s): 2-FBP		78.4%			50 - 150 %	"			"	
p-Terphenyl-d14		92.1%			50 - 150 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Petroleum Products by NWTPH-Dx
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
Diesel Range Hydrocarbons	NWTPH-Dx	452	—	17.2	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 02:38	
Heavy Oil Range Hydrocarbons	"	3830	—	1080	"	25x	"	"	09/15/09 18:02	
Surrogate(s): 2-FBP		77.4%			50 - 150 %	1x			09/12/09 02:38	
p-Terphenyl-d14		83.5%			50 - 150 %	"			"	
SSH0168-21 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
Diesel Range Hydrocarbons	NWTPH-Dx	342	J	43.6	mg/kg dry	4x	9090027	09/04/09 10:38	09/12/09 03:02	
Heavy Oil Range Hydrocarbons	"	985	J	109	"	"	"	"	"	
Surrogate(s): 2-FBP		12.5%			50 - 150 %	"			"	Z3
p-Terphenyl-d14		17.4%			50 - 150 %	"			"	Z3
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
Diesel Range Hydrocarbons	NWTPH-Dx	763	—	11.7	mg/kg dry	1x	9090027	09/04/09 10:38	09/12/09 03:25	
Heavy Oil Range Hydrocarbons	"	263	—	29.1	"	"	"	"	"	
Surrogate(s): 2-FBP		111%			50 - 150 %	"			"	
p-Terphenyl-d14		93.7%			50 - 150 %	"			"	
SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
Diesel Range Hydrocarbons	NWTPH-Dx	2120	—	18.6	mg/kg dry	1x	9090043	09/08/09 18:28	09/13/09 13:45	
Heavy Oil Range Hydrocarbons	"	1090	—	46.4	"	"	"	"	"	
Surrogate(s): 2-FBP		122%			50 - 150 %	"			"	
p-Terphenyl-d14		105%			50 - 150 %	"			"	
SSH0168-24 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
Diesel Range Hydrocarbons	NWTPH-Dx	1790	—	34.8	mg/kg dry	1x	9090070	09/10/09 14:30	09/16/09 20:36	
Heavy Oil Range Hydrocarbons	"	2050	—	87.1	"	"	"	"	"	
Surrogate(s): 2-FBP		110%			50 - 150 %	"			"	
p-Terphenyl-d14		115%			50 - 150 %	"			"	
SSH0168-25 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
Diesel Range Hydrocarbons	NWTPH-Dx	11.3	—	10.7	mg/kg dry	1x	9090043	09/08/09 18:28	09/13/09 14:10	
Heavy Oil Range Hydrocarbons	"	41.9	—	26.8	"	"	"	"	"	
Surrogate(s): 2-FBP		79.3%			50 - 150 %	"			"	
p-Terphenyl-d14		105%			50 - 150 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)										RL3
										Soil Sampled: 08/27/09 09:40
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.0831	mg/kg dry	5x	9090010	09/02/09 09:02	09/02/09 17:57	
2-Methylnaphthalene	"	ND	—	0.0831	"	"	"	"	"	
Acenaphthene	"	0.498	—	0.0831	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.0831	"	"	"	"	"	
Anthracene	"	1.55	—	0.0831	"	"	"	"	"	
Benzo (a) anthracene	"	0.348	—	0.0831	"	"	"	"	"	
Benzo (a) pyrene	"	0.301	—	0.0831	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.0831	"	"	"	"	"	
Benzo (ghi) perylene	"	0.459	—	0.0831	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.0831	"	"	"	"	"	
Chrysene	"	0.989	—	0.0831	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.245	—	0.0831	"	"	"	"	"	
Fluoranthene	"	0.150	—	0.0831	"	"	"	"	"	
Fluorene	"	1.41	—	0.0831	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.277	—	0.0831	"	"	"	"	"	
Naphthalene	"	0.427	—	0.0831	"	"	"	"	"	
Phenanthrene	"	0.894	—	0.0831	"	"	"	"	"	
Pyrene	"	2.25	—	0.0831	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		68.0%			38.8 - 139 %	"				
2-FBP		37.0%			40 - 132 %	"				Z3
p-Terphenyl-d14		132%			31.7 - 179 %	"				

SSH0168-02 (GTP1-13.5-082709)										
										Soil Q Sampled: 08/27/09 10:10
1-Methylnaphthalene	EPA 8270 mod.	0.0579	—	0.00495	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 19:13	
2-Methylnaphthalene	"	ND	—	0.00495	"	"	"	"	"	
Acenaphthene	"	0.00508	—	0.00495	"	"	"	"	"	Ia
Acenaphthylene	"	ND	—	0.00495	"	"	"	"	"	Ia
Anthracene	"	0.198	—	0.00495	"	"	"	"	"	Ia
Benzo (a) anthracene	"	0.0737	—	0.00495	"	"	"	"	"	Ia
Benzo (a) pyrene	"	0.0259	—	0.00495	"	"	"	"	"	Ia
Benzo (b) fluoranthene	"	0.0518	—	0.00495	"	"	"	"	"	Ia
Benzo (ghi) perylene	"	0.0345	—	0.00495	"	"	"	"	"	Ia
Benzo (k) fluoranthene	"	ND	—	0.00495	"	"	"	"	"	Ia
Chrysene	"	0.168	—	0.00495	"	"	"	"	"	Ia
Dibenzo (a,h) anthracene	"	0.0290	—	0.00495	"	"	"	"	"	Ia
Fluoranthene	"	0.0452	—	0.00495	"	"	"	"	"	Ia
Fluorene	"	0.0853	—	0.00495	"	"	"	"	"	Ia
Indeno (1,2,3-cd) pyrene	"	0.0269	—	0.00495	"	"	"	"	"	Ia
Naphthalene	"	0.0818	—	0.00495	"	"	"	"	"	

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc. 18300 NE Union Hill Rd. Suite 200 Redmond, WA 98077	Project Name: Avery Landing Project Number: 073-93312-03 Project Manager: Doug Morell	Report Created: 10/01/09 10:07
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Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane


Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-02 (GTP1-13.5-082709)			Soil				Sampled: 08/27/09 10:10			
Phenanthrene	EPA 8270 mod.	0.0635	5	0.00495	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 19:13	Ia
Pyrene	"	0.396	5	0.00495	"	"	"	"	"	Ia
Surrogate(s): Nitrobenzene-d5		114%			38.8 - 139 %	"			"	
2-FBP		28.0%			40 - 132 %	"			"	Ia, Z
p-Terphenyl-d14		151%			31.7 - 179 %	"			"	Ia

SSH0168-03 (GTP3-3.5-082709)			Soil				Sampled: 08/27/09 14:15			
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00467	mg/kg dry	1x	9080204	08/31/09 13:00	09/15/09 02:47	
2-Methylnaphthalene	"	ND	—	0.00467	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00467	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00467	"	"	"	"	"	
Anthracene	"	ND	—	0.00467	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00467	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00467	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.00958	—	0.00467	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0105	—	0.00467	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00467	"	"	"	"	"	
Chrysene	"	0.00670	—	0.00467	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00467	"	"	"	"	"	
Fluoranthene	"	0.00527	—	0.00467	"	"	"	"	"	
Fluorene	"	ND	—	0.00467	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00862	—	0.00467	"	"	"	"	"	
Naphthalene	"	ND	—	0.00467	"	"	"	"	"	
Phenanthrene	"	0.00527	—	0.00467	"	"	"	"	"	
Pyrene	"	0.0101	—	0.00467	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		74.4%			38.8 - 139 %	"			"	
2-FBP		81.2%			40 - 132 %	"			"	
p-Terphenyl-d14		106%			31.7 - 179 %	"			"	

SSH0168-04 (GTP3-5-082709)			Soil				Sampled: 08/27/09 14:35			RL3
1-Methylnaphthalene	EPA 8270 mod.	0.0105	—	0.00645	mg/kg dry	1x	9090010	09/02/09 09:02	09/02/09 17:35	
2-Methylnaphthalene	"	0.0105	—	0.00645	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00645	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00645	"	"	"	"	"	
Anthracene	"	0.805	—	0.00645	"	"	"	"	"	
Benzo (a) anthracene	"	0.0295	—	0.00645	"	"	"	"	"	
Benzo (a) pyrene	"	0.0350	—	0.00645	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0627	—	0.00645	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35				RL3		
Benzo (ghi) perylene	EPA 8270 mod.	0.0541	—	0.00645	mg/kg dry	1x	9090010	09/02/09 09:02	09/02/09 17:35	
Benzo (k) fluoranthene	"	ND	—	0.00645	"	"	"	"	"	
Chrysene	"	0.0725	—	0.00645	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.0154	—	0.00645	"	"	"	"	"	
Fluoranthene	"	0.141	—	0.00645	"	"	"	"	"	
Fluorene	"	0.00984	—	0.00645	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0264	—	0.00645	"	"	"	"	"	
Naphthalene	"	ND	—	0.00645	"	"	"	"	"	
Phenanthrene	"	0.0799	—	0.00645	"	"	"	"	"	
Pyrene	"	0.168	—	0.00645	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5										
		101%		38.8 - 139 %	"					
2-FBP		52.4%		40 - 132 %	"					
p-Terphenyl-d14		106%		31.7 - 179 %	"					
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00474	mg/kg dry	1x	9090010	09/02/09 09:02	09/02/09 17:14	
2-Methylnaphthalene	"	ND	—	0.00474	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00474	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00474	"	"	"	"	"	
Anthracene	"	ND	—	0.00474	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00474	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00474	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00474	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00474	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00474	"	"	"	"	"	
Chrysene	"	ND	—	0.00474	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00474	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00474	"	"	"	"	"	
Fluorene	"	ND	—	0.00474	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00474	"	"	"	"	"	
Naphthalene	"	ND	—	0.00474	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00474	"	"	"	"	"	
Pyrene	"	ND	—	0.00474	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5										
		43.4%		38.8 - 139 %	"					
2-FBP		44.4%		40 - 132 %	"					
p-Terphenyl-d14		61.2%		31.7 - 179 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07


Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00492	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 03:51	
2-Methylnaphthalene	"	ND	—	0.00492	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00492	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00492	"	"	"	"	"	
Anthracene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (a) pyrene	"	0.00516	—	0.00492	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0117	—	0.00492	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00985	—	0.00492	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00492	"	"	"	"	"	
Chrysene	"	0.00609	—	0.00492	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00492	"	"	"	"	"	
Fluoranthene	"	0.00656	—	0.00492	"	"	"	"	"	
Fluorene	"	ND	—	0.00492	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00492	"	"	"	"	"	
Naphthalene	"	ND	—	0.00492	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00492	"	"	"	"	"	
Pyrene	"	0.0136	—	0.00492	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		39.8%			38.8 - 139 %	"			"	
2-FBP		47.2%			40 - 132 %	"			"	
p-Terphenyl-d14		95.4%			31.7 - 179 %	"			"	

SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00500	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 00:18	
2-Methylnaphthalene	"	ND	—	0.00500	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00500	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00500	"	"	"	"	"	
Anthracene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00500	"	"	"	"	"	
Chrysene	"	ND	—	0.00500	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00500	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00500	"	"	"	"	"	
Fluorene	"	ND	—	0.00500	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00500	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
Naphthalene	EPA 8270 mod.	ND	—	0.00500	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 00:18	
Phenanthrene	"	ND	—	0.00500	"	"	"	"	"	
Pyrene	"	ND	—	0.00500	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		54.4%			38.8 - 139 %	"			"	
2-FBP		59.2%			40 - 132 %	"			"	
p-Terphenyl-d14		89.0%			31.7 - 179 %	"			"	

SSH0168-09 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00447	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 02:05	
2-Methylnaphthalene	"	ND	—	0.00447	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00447	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00447	"	"	"	"	"	
Anthracene	"	ND	—	0.00447	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00447	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00447	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00447	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00447	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00447	"	"	"	"	"	
Chrysene	"	ND	—	0.00447	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00447	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00447	"	"	"	"	"	
Fluorene	"	ND	—	0.00447	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00447	"	"	"	"	"	
Naphthalene	"	ND	—	0.00447	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00447	"	"	"	"	"	
Pyrene	"	ND	—	0.00447	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		77.0%			38.8 - 139 %	"			"	
2-FBP		81.6%			40 - 132 %	"			"	
p-Terphenyl-d14		95.6%			31.7 - 179 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53		RL3				
1-Methylnaphthalene	EPA 8270 mod.	0.00826	—	0.00689	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 00:39	
2-Methylnaphthalene	"	ND	—	0.00689	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00689	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00689	"	"	"	"	"	
Anthracene	"	ND	—	0.00689	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00689	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00689	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00689	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00689	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00689	"	"	"	"	"	
Chrysene	"	ND	—	0.00689	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00689	"	"	"	"	"	
Fluoranthene	"	0.0579	—	0.00689	"	"	"	"	"	
Fluorene	"	ND	—	0.00689	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00689	"	"	"	"	"	
Naphthalene	"	0.0147	—	0.00689	"	"	"	"	"	
Phenanthrene	"	0.0340	—	0.00689	"	"	"	"	"	
Pyrene	"	0.295	—	0.00689	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		66.4%			38.8 - 139 %	"			"	
2-FBP		77.6%			40 - 132 %	"			"	
p-Terphenyl-d14		83.8%			31.7 - 179 %	"			"	

SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
1-Methylnaphthalene	EPA 8270 mod.	20.9	—	0.209	mg/kg dry	20x	9090042	09/08/09 13:27	09/18/09 17:15	A-01
2-Methylnaphthalene	"	39.1	—	0.209	"	"	"	"	"	A-01
Acenaphthene	"	0.172	—	0.00471	"	1x	"	"	09/15/09 02:26	A-01
Acenaphthylene	"	ND	—	0.00471	"	"	"	"	"	A-01
Anthracene	"	0.754	—	0.00471	"	"	"	"	"	
Benzo (a) anthracene	"	0.00767	—	0.00471	"	"	"	"	"	
Benzo (a) pyrene	"	0.00488	—	0.00471	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00471	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0209	—	0.00471	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00471	"	"	"	"	"	
Chrysene	"	0.0153	—	0.00471	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00471	"	"	"	"	"	
Fluoranthene	"	0.0914	—	0.00471	"	"	"	"	"	
Fluorene	"	0.207	—	0.00471	"	"	"	"	"	A-01
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00471	"	"	"	"	"	
Naphthalene	"	2.39	—	0.00471	"	"	"	"	"	A-01

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36							
Phenanthrene	EPA 8270 mod	ND	---	0.00471	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 02:26		
Pyrene	"	0.112	---	0.00471	"	"	"	"	"		
Surrogate(s): Nitrobenzene-d5		161%		38.8 - 139 %		"		"		A-01, ZX	
2-FBP		26.0%		40 - 132 %		"		"		A-01, Z	
p-Terphenyl-d14		93.2%		31.7 - 179 %		"		"			
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10							
1-Methylnaphthalene	EPA 8270 mod	ND	---	0.00455	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 21:48		
2-Methylnaphthalene	"	ND	---	0.00455	"	"	"	"	"		
Acenaphthene	"	ND	---	0.00455	"	"	"	"	"		
Acenaphthylene	"	ND	---	0.00455	"	"	"	"	"		
Anthracene	"	ND	---	0.00455	"	"	"	"	"		
Benzo (a) anthracene	"	ND	---	0.00455	"	"	"	"	"		
Benzo (a) pyrene	"	ND	---	0.00455	"	"	"	"	"		
Benzo (b) fluoranthene	"	ND	---	0.00455	"	"	"	"	"		
Benzo (ghi) perylene	"	ND	---	0.00455	"	"	"	"	"		
Benzo (k) fluoranthene	"	ND	---	0.00455	"	"	"	"	"		
Chrysene	"	ND	---	0.00455	"	"	"	"	"		
Dibenzo (a,h) anthracene	"	ND	---	0.00455	"	"	"	"	"		
Fluoranthene	"	ND	---	0.00455	"	"	"	"	"		
Fluorene	"	ND	---	0.00455	"	"	"	"	"		
Indeno (1,2,3-cd) pyrene	"	ND	---	0.00455	"	"	"	"	"		
Naphthalene	"	ND	---	0.00455	"	"	"	"	"		
Phenanthrene	"	ND	---	0.00455	"	"	"	"	"		
Pyrene	"	ND	---	0.00455	"	"	"	"	"		
Surrogate(s): Nitrobenzene-d5		69.6%		38.8 - 139 %		"		"			
2-FBP		80.2%		40 - 132 %		"		"			
p-Terphenyl-d14		99.4%		31.7 - 179 %		"		"			
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11							RL3
1-Methylnaphthalene	EPA 8270 mod	0.0412	---	0.00514	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 03:30		
2-Methylnaphthalene	"	0.0658	---	0.00514	"	"	"	"	"		
Acenaphthene	"	ND	---	0.00514	"	"	"	"	"		
Acenaphthylene	"	ND	---	0.00514	"	"	"	"	"		
Anthracene	"	0.00823	---	0.00514	"	"	"	"	"		
Benzo (a) anthracene	"	0.0130	---	0.00514	"	"	"	"	"		
Benzo (a) pyrene	"	0.0110	---	0.00514	"	"	"	"	"		
Benzo (b) fluoranthene	"	0.0178	---	0.00514	"	"	"	"	"		

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11		RL3				
Benzo (ghi) perylene	EPA 8270 mod.	0.0103	—	0.00514	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 03:30	
Benzo (k) fluoranthene	"	ND	—	0.00514	"	"	"	"	"	
Chrysene	"	0.0178	—	0.00514	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00549	—	0.00514	"	"	"	"	"	
Fluoranthene	"	0.0151	—	0.00514	"	"	"	"	"	
Fluorene	"	0.00549	—	0.00514	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00617	—	0.00514	"	"	"	"	"	
Naphthalene	"	0.0185	—	0.00514	"	"	"	"	"	
Phenanthrene	"	0.0130	—	0.00514	"	"	"	"	"	
Pyrene	"	0.0343	—	0.00514	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5										
		35.6%			38.8 - 139 %	"				Z
2-FBP										
		43.2%			40 - 132 %	"				
p-Terphenyl-d14										
		68.4%			31.7 - 179 %	"				

SSH0168-14 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00492	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 23:14	
2-Methylnaphthalene	"	ND	—	0.00492	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00492	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00492	"	"	"	"	"	
Anthracene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00492	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00492	"	"	"	"	"	
Chrysene	"	ND	—	0.00492	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00492	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00492	"	"	"	"	"	
Fluorene	"	ND	—	0.00492	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00492	"	"	"	"	"	
Naphthalene	"	ND	—	0.00492	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00492	"	"	"	"	"	
Pyrene	"	ND	—	0.00492	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5										
		56.4%			38.8 - 139 %	"				
2-FBP										
		63.2%			40 - 132 %	"				
p-Terphenyl-d14										
		91.2%			31.7 - 179 %	"				

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-15 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00489	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 23:35	
2-Methylnaphthalene	"	ND	—	0.00489	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00489	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00489	"	"	"	"	"	
Anthracene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00489	"	"	"	"	"	
Chrysene	"	ND	—	0.00489	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00489	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00489	"	"	"	"	"	
Fluorene	"	ND	—	0.00489	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00489	"	"	"	"	"	
Naphthalene	"	ND	—	0.00489	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00489	"	"	"	"	"	
Pyrene	"	ND	—	0.00489	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		63.8%		38.8 - 139 %	"				"	
2-FBP		76.6%		40 - 132 %	"				"	
p-Terphenyl-d14		97.2%		31.7 - 179 %	"				"	

SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00451	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 23:56	
2-Methylnaphthalene	"	ND	—	0.00451	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00451	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00451	"	"	"	"	"	
Anthracene	"	ND	—	0.00451	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00451	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00451	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00451	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00451	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00451	"	"	"	"	"	
Chrysene	"	ND	—	0.00451	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00451	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00451	"	"	"	"	"	
Fluorene	"	ND	—	0.00451	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00451	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
Naphthalene	EPA 8270 mod.	ND	---	0.00451	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 23:56	
Phenanthrene	"	ND	---	0.00451	"	"	"	"	"	
Pyrene	"	ND	---	0.00451	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		69.2%		38.8 - 139 %	"					
2-FBP		74.0%		40 - 132 %	"					
p-Terphenyl-d14		89.0%		31.7 - 179 %	"					
SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.00471	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 18:09	
2-Methylnaphthalene	"	ND	---	0.00471	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00471	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00471	"	"	"	"	"	
Anthracene	"	ND	---	0.00471	"	"	"	"	"	
Benzo (a) anthracene	"	0.0168	---	0.00471	"	"	"	"	"	
Benzo (a) pyrene	"	0.0162	---	0.00471	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0335	---	0.00471	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0204	---	0.00471	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00471	"	"	"	"	"	
Chrysene	"	0.0178	---	0.00471	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00785	---	0.00471	"	"	"	"	"	
Fluoranthene	"	0.0257	---	0.00471	"	"	"	"	"	
Fluorene	"	ND	---	0.00471	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0126	---	0.00471	"	"	"	"	"	
Naphthalene	"	ND	---	0.00471	"	"	"	"	"	
Phenanthrene	"	0.00628	---	0.00471	"	"	"	"	"	
Pyrene	"	0.0398	---	0.00471	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		31.8%		38.8 - 139 %	"					Z
2-FBP		28.6%		40 - 132 %	"					Z
p-Terphenyl-d14		43.2%		31.7 - 179 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00461	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 01:22	
2-Methylnaphthalene	"	ND	—	0.00461	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00461	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00461	"	"	"	"	"	
Anthracene	"	ND	—	0.00461	"	"	"	"	"	
Benzo (a) anthracene	"	0.00820	—	0.00461	"	"	"	"	"	
Benzo (a) pyrene	"	0.00769	—	0.00461	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0123	—	0.00461	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00666	—	0.00461	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00461	"	"	"	"	"	
Chrysene	"	0.00871	—	0.00461	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00461	"	"	"	"	"	
Fluoranthene	"	0.00820	—	0.00461	"	"	"	"	"	
Fluorene	"	ND	—	0.00461	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00461	—	0.00461	"	"	"	"	"	
Naphthalene	"	ND	—	0.00461	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00461	"	"	"	"	"	
Pyrene	"	0.0138	—	0.00461	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		75.2%		38.8 - 139 %	"				"	
2-FBP		81.8%		40 - 132 %	"				"	
p-Terphenyl-d14		96.4%		31.7 - 179 %	"				"	

SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00465	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 22:52	
2-Methylnaphthalene	"	ND	—	0.00465	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00465	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00465	"	"	"	"	"	
Anthracene	"	ND	—	0.00465	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00465	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00465	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00465	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00465	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00465	"	"	"	"	"	
Chrysene	"	ND	—	0.00465	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00465	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00465	"	"	"	"	"	
Fluorene	"	ND	—	0.00465	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00465	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
Naphthalene	EPA 8270 mod.	ND	---	0.00465	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 22:52	
Phenanthrene	"	ND	---	0.00465	"	"	"	"	"	
Pyrene	"	ND	---	0.00465	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		57.6%			38.8 - 139 %	"			"	
2-FBP		64.8%			40 - 132 %	"			"	
p-Terphenyl-d14		85.4%			31.7 - 179 %	"			"	
SSH0168-20 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
RL3										
1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.0268	mg/kg dry	5x	9090042	09/08/09 13:27	09/15/09 19:56	
2-Methylnaphthalene	"	ND	---	0.0268	"	"	"	"	"	
Acenaphthene	"	ND	---	0.0268	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.0268	"	"	"	"	"	
Anthracene	"	ND	---	0.0268	"	"	"	"	"	
Benzo (a) anthracene	"	0.0459	---	0.0268	"	"	"	"	"	
Benzo (a) pyrene	"	0.0561	---	0.0268	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0968	---	0.0268	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0637	---	0.0268	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.0268	"	"	"	"	"	
Chrysene	"	0.0382	---	0.0268	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	---	0.0268	"	"	"	"	"	
Fluoranthene	"	ND	---	0.0268	"	"	"	"	"	
Fluorene	"	ND	---	0.0268	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0510	---	0.0268	"	"	"	"	"	
Naphthalene	"	ND	---	0.0268	"	"	"	"	"	
Phenanthrene	"	ND	---	0.0268	"	"	"	"	"	
Pyrene	"	0.133	---	0.0268	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		19.0%			38.8 - 139 %	"			"	Z3
2-FBP		17.0%			40 - 132 %	"			"	Z3
p-Terphenyl-d14		44.0%			31.7 - 179 %	"			"	

TestAmerica Spokane

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Randee Docket, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-21 (GTP5-11-082809)			Soil				Sampled: 08/28/09 09:37			RL2
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.0254	mg/kg dry	5x	9090042	09/08/09 13:27	09/15/09 06:42	
2-Methylnaphthalene	"	ND	—	0.0254	"	"	"	"	"	
Acenaphthene	"	ND	—	0.0254	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.0254	"	"	"	"	"	
Anthracene	"	ND	—	0.0254	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.0254	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.0254	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.0254	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.0254	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.0254	"	"	"	"	"	
Chrysene	"	ND	—	0.0254	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.0254	"	"	"	"	"	
Fluoranthene	"	ND	—	0.0254	"	"	"	"	"	
Fluorene	"	ND	—	0.0254	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.0254	"	"	"	"	"	
Naphthalene	"	ND	—	0.0254	"	"	"	"	"	
Phenanthrene	"	ND	—	0.0254	"	"	"	"	"	
Pyrene	"	ND	—	0.0254	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		51.0%		38.8 - 139 %	"					
2-FBP		54.0%		40 - 132 %	"					
p-Terphenyl-d14		81.0%		31.7 - 179 %	"					

SSH0168-22 (TS-COMP-1)			Soil				Sampled: 08/27/09 18:10			
1-Methylnaphthalene	EPA 8270 mod.	1.56	—	0.00466	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 06:20	
2-Methylnaphthalene	"	1.52	—	0.00466	"	"	"	"	"	
Acenaphthene	"	0.270	—	0.00466	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00466	"	"	"	"	"	
Anthracene	"	0.206	—	0.00466	"	"	"	"	"	
Benzo (a) anthracene	"	0.0202	—	0.00466	"	"	"	"	"	
Benzo (a) pyrene	"	0.00777	—	0.00466	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0155	—	0.00466	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0104	—	0.00466	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00466	"	"	"	"	"	
Chrysene	"	0.0394	—	0.00466	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00829	—	0.00466	"	"	"	"	"	
Fluoranthene	"	0.0233	—	0.00466	"	"	"	"	"	
Fluorene	"	0.374	—	0.00466	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00725	—	0.00466	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
Naphthalene	EPA 8270 mod.	0.114	—	0.00466	mg/kg dry	1x	9090042	09/08/09 13:27	09/15/09 06:20	
Phenanthrene	"	0.664	—	0.00466	"	"	"	"	"	
Pyrene	"	0.110	—	0.00466	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		70.6%			38.8 - 139 %	"			"	
2-FBP		56.0%			40 - 132 %	"			"	
p-Terphenyl-d14		96.8%			31.7 - 179 %	"			"	
SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
1-Methylnaphthalene	EPA 8270 mod.	10.5	—	0.0538	mg/kg dry	10x	9090042	09/08/09 13:27	09/15/09 04:55	
2-Methylnaphthalene	"	14.2	—	0.0538	"	"	"	"	"	
Acenaphthene	"	0.959	—	0.0538	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.0538	"	"	"	"	"	
Anthracene	"	1.24	—	0.0538	"	"	"	"	"	
Benzo (a) anthracene	"	0.144	—	0.0538	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.0538	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.108	—	0.0538	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.0538	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.0538	"	"	"	"	"	
Chrysene	"	0.236	—	0.0538	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.0538	"	"	"	"	"	
Fluoranthene	"	0.379	—	0.0538	"	"	"	"	"	
Fluorene	"	1.39	—	0.0538	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.0538	"	"	"	"	"	
Naphthalene	"	1.89	—	0.0538	"	"	"	"	"	
Phenanthrene	"	4.21	—	0.0538	"	"	"	"	"	
Pyrene	"	1.05	—	0.0538	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		236%			38.8 - 139 %	"			"	23
2-FBP		76.0%			40 - 132 %	"			"	
p-Terphenyl-d14		112%			31.7 - 179 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

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Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24 (TS-COMP-3)		Soil Q		Sampled: 08/27/09 16:40				RL3		
1-Methylnaphthalene	EPA 8270 mod.	0.759	—	0.0155	mg/kg dry	2x	9090060	09/10/09 09:59	09/15/09 19:34	
2-Methylnaphthalene	"	0.459	—	0.0155	"	"	"	"	"	
Acenaphthene	"	0.111	—	0.0155	"	"	"	"	"	A-01
Acenaphthylene	"	0.0186	—	0.0155	"	"	"	"	"	A-01
Anthracene	"	0.167	—	0.0155	"	"	"	"	"	A-01
Benzo (a) anthracene	"	0.0258	—	0.0155	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.0155	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0330	—	0.0155	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0217	—	0.0155	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.0155	"	"	"	"	"	
Chrysene	"	0.0733	—	0.0155	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.0165	—	0.0155	"	"	"	"	"	
Fluoranthene	"	0.0557	—	0.0155	"	"	"	"	"	A-01
Fluorene	"	0.184	—	0.0155	"	"	"	"	"	A-01
Indeno (1,2,3-cd) pyrene	"	0.0155	—	0.0155	"	"	"	"	"	
Naphthalene	"	0.109	—	0.0155	"	"	"	"	"	
Phenanthrene	"	0.277	—	0.0155	"	"	"	"	"	A-01
Pyrene	"	0.275	—	0.0155	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		84.8%		38.8 - 139 %	"	"	"	"	"	
2-FBP		29.6%		40 - 132 %	"	"	"	"	"	
p-Terphenyl-d14		104%		31.7 - 179 %	"	"	"	"	"	A-01, Z3

SSH0168-25 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00500	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 22:31	
2-Methylnaphthalene	"	ND	—	0.00500	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00500	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00500	"	"	"	"	"	
Anthracene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.00953	—	0.00500	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00500	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00500	"	"	"	"	"	
Chrysene	"	ND	—	0.00500	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00500	"	"	"	"	"	
Fluoranthene	"	0.00524	—	0.00500	"	"	"	"	"	
Fluorene	"	ND	—	0.00500	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00500	"	"	"	"	"	
Naphthalene	"	ND	—	0.00500	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-25 (GTP4-6.0-082709)		Soil						Sampled: 08/27/09 15:49		
Phenanthrene	EPA 8270 mod.	ND	—	0.00500	mg/kg dry	1x	9090042	09/08/09 13:27	09/14/09 22:31	
Pyrene	"	0.00905	—	0.00500	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		63.8%			38.8 - 139 %	"			"	
2-FBP		69.8%			40 - 132 %	"			"	
p-Terphenyl-d14		90.6%			31.7 - 179 %	"			"	



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil		Sampled: 08/27/09 09:40						
PCB-1016	EPA 8082	ND	---	9.81	ug/kg dry	1x	9090048	09/09/09 09:20	09/17/09 08:02	
PCB-1221	"	ND	---	9.81	"	"	"	"	"	
PCB-1232	"	ND	---	9.81	"	"	"	"	"	
PCB-1242	"	ND	---	9.81	"	"	"	"	"	
PCB-1248	"	ND	---	9.81	"	"	"	"	"	
PCB-1254	"	ND	---	9.81	"	"	"	"	"	
PCB-1260	"	ND	---	9.81	"	"	"	"	"	
Surrogate(s): TCX		58.2%		27.9 - 154 %		"		"		
Decachlorobiphenyl		41.9%		35 - 157 %		"		"		
SSH0168-02 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
PCB-1016	EPA 8082	ND	---	9.60	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 02:07	
PCB-1221	"	ND	---	9.60	"	"	"	"	09/15/09 01:45	
PCB-1232	"	ND	---	9.60	"	"	"	"	"	
PCB-1242	"	ND	---	9.60	"	"	"	"	"	
PCB-1248	"	ND	---	9.60	"	"	"	"	"	
PCB-1254	"	ND	---	9.60	"	"	"	"	"	
PCB-1260	"	ND	---	9.60	"	"	"	"	09/15/09 02:07	
Surrogate(s): TCX		78.7%		27.9 - 154 %		"		"		
Decachlorobiphenyl		18.9%		35 - 157 %		"		" Z		
SSH0168-03 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
PCB-1016	EPA 8082	ND	---	9.91	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 02:07	
PCB-1221	"	ND	---	9.91	"	"	"	"	"	
PCB-1232	"	ND	---	9.91	"	"	"	"	"	
PCB-1242	"	ND	---	9.91	"	"	"	"	"	
PCB-1248	"	ND	---	9.91	"	"	"	"	"	
PCB-1254	"	ND	---	9.91	"	"	"	"	"	
PCB-1260	"	ND	---	9.91	"	"	"	"	"	
Surrogate(s): TCX		83.0%		27.9 - 154 %		"		"		
Decachlorobiphenyl		60.0%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
PCB-1016	EPA 8082	ND	---	9.96	ug/kg dry	1x	9090048	09/09/09 09:20	09/15/09 02:52	
PCB-1221	"	ND	---	9.96	"	"	"	"	09/15/09 02:30	
PCB-1232	"	ND	---	9.96	"	"	"	"	"	
PCB-1242	"	ND	---	9.96	"	"	"	"	"	
PCB-1248	"	ND	---	9.96	"	"	"	"	"	
PCB-1254	"	ND	---	9.96	"	"	"	"	"	
PCB-1260	"	ND	---	9.96	"	"	"	"	09/15/09 02:52	
Surrogate(s): TCX		46.8%		27.9 - 154 %		"		"		
Decachlorobiphenyl		31.4%		35 - 157 %		"		" Z		
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
PCB-1016	EPA 8082	ND	UT	9.83	ug/kg dry	1x	9090048	09/09/09 09:20	09/16/09 13:15	
PCB-1221	"	ND	---	9.83	"	"	"	"	"	
PCB-1232	"	ND	---	9.83	"	"	"	"	"	
PCB-1242	"	ND	---	9.83	"	"	"	"	"	
PCB-1248	"	ND	---	9.83	"	"	"	"	"	
PCB-1254	"	ND	---	9.83	"	"	"	"	"	
PCB-1260	"	ND	UT	9.83	"	"	"	"	09/16/09 13:38	
Surrogate(s): TCX		71.3%		27.9 - 154 %		"		09/16/09 13:15		
Decachlorobiphenyl		73.3%		35 - 157 %		"		"		
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
PCB-1016	EPA 8082	ND	---	9.70	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 20:23	
PCB-1221	"	ND	---	9.70	"	"	"	"	"	
PCB-1232	"	ND	---	9.70	"	"	"	"	"	
PCB-1242	"	ND	---	9.70	"	"	"	"	"	
PCB-1248	"	ND	---	9.70	"	"	"	"	"	
PCB-1254	"	ND	---	9.70	"	"	"	"	"	
PCB-1260	"	18.5	---	9.70	"	"	"	"	"	
Surrogate(s): TCX		103%		27.9 - 154 %		"		"		
Decachlorobiphenyl		101%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
PCB-1016	EPA 8082	ND	—	9.85	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 20:46	
PCB-1221	"	ND	—	9.85	"	"	"	"	"	
PCB-1232	"	ND	—	9.85	"	"	"	"	"	
PCB-1242	"	ND	—	9.85	"	"	"	"	"	
PCB-1248	"	ND	—	9.85	"	"	"	"	"	
PCB-1254	"	ND	—	9.85	"	"	"	"	"	
PCB-1260	"	ND	—	9.85	"	"	"	"	"	

Surrogate(s): TCX
Decachlorobiphenyl

81.5% 27.9 - 154 %
87.4% 35 - 157 %

SSH0168-09 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
PCB-1016	EPA 8082	ND	—	9.84	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 21:08	
PCB-1221	"	ND	—	9.84	"	"	"	"	"	
PCB-1232	"	ND	—	9.84	"	"	"	"	"	
PCB-1242	"	ND	—	9.84	"	"	"	"	"	
PCB-1248	"	ND	—	9.84	"	"	"	"	"	
PCB-1254	"	ND	—	9.84	"	"	"	"	"	
PCB-1260	"	ND	—	9.84	"	"	"	"	"	

Surrogate(s): TCX
Decachlorobiphenyl

26.7% 27.9 - 154 %
23.3% 35 - 157 %

SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
PCB-1016	EPA 8082	ND	—	12.4	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 21:31	
PCB-1221	"	ND	—	12.4	"	"	"	"	"	
PCB-1232	"	ND	—	12.4	"	"	"	"	"	
PCB-1242	"	ND	—	12.4	"	"	"	"	"	
PCB-1248	"	ND	—	12.4	"	"	"	"	"	
PCB-1254	"	ND	—	12.4	"	"	"	"	"	
PCB-1260	"	ND	—	12.4	"	"	"	"	"	

Surrogate(s): TCX
Decachlorobiphenyl

68.5% 27.9 - 154 %
61.3% 35 - 157 %

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
PCB-1016	EPA 8082	ND	---	9.42	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 21:54	
PCB-1221	"	ND	---	9.42	"	"	"	"	"	
PCB-1232	"	ND	---	9.42	"	"	"	"	"	
PCB-1242	"	ND	---	9.42	"	"	"	"	"	
PCB-1248	"	ND	---	9.42	"	"	"	"	"	
PCB-1254	"	ND	---	9.42	"	"	"	"	"	
PCB-1260	"	ND	---	9.42	"	"	"	"	"	
Surrogate(s): TCX		67.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		29.5%		35 - 157 %		"		" Z		
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
PCB-1016	EPA 8082	ND	---	9.56	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 22:16	
PCB-1221	"	ND	---	9.56	"	"	"	"	"	
PCB-1232	"	ND	---	9.56	"	"	"	"	"	
PCB-1242	"	ND	---	9.56	"	"	"	"	"	
PCB-1248	"	ND	---	9.56	"	"	"	"	"	
PCB-1254	"	ND	---	9.56	"	"	"	"	"	
PCB-1260	"	ND	---	9.56	"	"	"	"	"	
Surrogate(s): TCX		78.6%		27.9 - 154 %		"		"		
Decachlorobiphenyl		85.5%		35 - 157 %		"		"		
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
PCB-1016	EPA 8082	ND	---	9.88	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 22:39	
PCB-1221	"	ND	---	9.88	"	"	"	"	"	
PCB-1232	"	ND	---	9.88	"	"	"	"	"	
PCB-1242	"	ND	---	9.88	"	"	"	"	"	
PCB-1248	"	ND	---	9.88	"	"	"	"	"	
PCB-1254	"	ND	---	9.88	"	"	"	"	"	
PCB-1260	"	ND	---	9.88	"	"	"	"	"	
Surrogate(s): TCX		48.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		39.8%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)										
		Soil		Sampled: 08/28/09 12:50						
PCB-1016	EPA 8082	ND	—	9.69	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 23:01	
PCB-1221	"	ND	—	9.69	"	"	"	"	"	
PCB-1232	"	ND	—	9.69	"	"	"	"	"	
PCB-1242	"	ND	—	9.69	"	"	"	"	"	
PCB-1248	"	ND	—	9.69	"	"	"	"	"	
PCB-1254	"	ND	—	9.69	"	"	"	"	"	
PCB-1260	"	ND	—	9.69	"	"	"	"	"	
Surrogate(s): TCX		91.0%		27.9 - 154 %		"		"		
Decachlorobiphenyl		79.5%		35 - 157 %		"		"		
SSH0168-15 (GTP7-10.0-082809)										
		Soil		Sampled: 08/28/09 13:27						
PCB-1016	EPA 8082	ND	—	9.63	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 23:23	
PCB-1221	"	ND	—	9.63	"	"	"	"	"	
PCB-1232	"	ND	—	9.63	"	"	"	"	"	
PCB-1242	"	ND	—	9.63	"	"	"	"	"	
PCB-1248	"	ND	—	9.63	"	"	"	"	"	
PCB-1254	"	ND	—	9.63	"	"	"	"	"	
PCB-1260	"	ND	—	9.63	"	"	"	"	"	
Surrogate(s): TCX		85.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		86.1%		35 - 157 %		"		"		
SSH0168-16 (GTP7-18-082809)										
		Soil		Sampled: 08/28/09 13:58						
PCB-1016	EPA 8082	ND	—	9.93	ug/kg dry	1x	9090086	09/14/09 07:36	09/16/09 23:46	
PCB-1221	"	ND	—	9.93	"	"	"	"	"	
PCB-1232	"	ND	—	9.93	"	"	"	"	"	
PCB-1242	"	ND	—	9.93	"	"	"	"	"	
PCB-1248	"	ND	—	9.93	"	"	"	"	"	
PCB-1254	"	ND	—	9.93	"	"	"	"	"	
PCB-1260	"	ND	—	9.93	"	"	"	"	"	
Surrogate(s): TCX		97.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		98.7%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
PCB-1016	EPA 8082	ND	---	9.89	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 09:56	
PCB-1221	"	ND	---	9.89	"	"	"	"	"	
PCB-1232	"	ND	---	9.89	"	"	"	"	"	
PCB-1242	"	ND	---	9.89	"	"	"	"	"	
PCB-1248	"	ND	---	9.89	"	"	"	"	"	
PCB-1254	"	ND	---	9.89	"	"	"	"	"	
PCB-1260	"	22.3	---	9.89	"	"	"	"	"	
Surrogate(s): TCX		67.4%		27.9 - 154 %		"		"		
Decachlorobiphenyl		124%		35 - 157 %		"		"		
SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
PCB-1016	EPA 8082	ND	---	9.69	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 10:18	
PCB-1221	"	ND	---	9.69	"	"	"	"	"	
PCB-1232	"	ND	---	9.69	"	"	"	"	"	
PCB-1242	"	ND	---	9.69	"	"	"	"	"	
PCB-1248	"	ND	---	9.69	"	"	"	"	"	
PCB-1254	"	ND	---	9.69	"	"	"	"	"	
PCB-1260	"	ND	---	9.69	"	"	"	"	"	
Surrogate(s): TCX		85.1%		27.9 - 154 %		"		"		
Decachlorobiphenyl		75.4%		35 - 157 %		"		"		
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
PCB-1016	EPA 8082	ND	---	9.63	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 10:41	
PCB-1221	"	ND	---	9.63	"	"	"	"	"	
PCB-1232	"	ND	---	9.63	"	"	"	"	"	
PCB-1242	"	ND	---	9.63	"	"	"	"	"	
PCB-1248	"	ND	---	9.63	"	"	"	"	"	
PCB-1254	"	ND	---	9.63	"	"	"	"	"	
PCB-1260	"	ND	---	9.63	"	"	"	"	"	
Surrogate(s): TCX		70.1%		27.9 - 154 %		"		"		
Decachlorobiphenyl		70.4%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
PCB-1016	EPA 8082	ND	---	9.63	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 13:35	
PCB-1221	"	ND	---	9.63	"	"	"	"	"	
PCB-1232	"	ND	---	9.63	"	"	"	"	"	
PCB-1242	"	ND	---	9.63	"	"	"	"	"	
PCB-1248	"	ND	---	9.63	"	"	"	"	"	
PCB-1254	"	ND	---	9.63	"	"	"	"	"	
PCB-1260	"	ND	---	9.63	"	"	"	"	"	
Surrogate(s): TCX		55.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		28.1%		35 - 157 %		"		"		Z
SSH0168-21 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
PCB-1016	EPA 8082	ND	---	9.59	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 13:58	
PCB-1221	"	ND	---	9.59	"	"	"	"	"	
PCB-1232	"	ND	---	9.59	"	"	"	"	"	
PCB-1242	"	ND	---	9.59	"	"	"	"	"	
PCB-1248	"	ND	---	9.59	"	"	"	"	"	
PCB-1254	"	ND	---	9.59	"	"	"	"	"	
PCB-1260	"	ND	---	9.59	"	"	"	"	"	
Surrogate(s): TCX		67.6%		27.9 - 154 %		"		"		
Decachlorobiphenyl		58.9%		35 - 157 %		"		"		
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
PCB-1016	EPA 8082	ND	---	9.79	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 14:21	
PCB-1221	"	ND	---	9.79	"	"	"	"	"	
PCB-1232	"	ND	---	9.79	"	"	"	"	"	
PCB-1242	"	ND	---	9.79	"	"	"	"	"	
PCB-1248	"	ND	---	9.79	"	"	"	"	"	
PCB-1254	"	ND	---	9.79	"	"	"	"	"	
PCB-1260	"	12.8	---	9.79	"	"	"	"	"	
Surrogate(s): TCX		78.4%		27.9 - 154 %		"		"		
Decachlorobiphenyl		42.5%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
PCB-1016	EPA 8082	ND	—	9.69	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 16:13	
PCB-1221	"	ND	—	9.69	"	"	"	"	09/17/09 15:51	
PCB-1232	"	ND	—	9.69	"	"	"	"	"	
PCB-1242	"	ND	—	9.69	"	"	"	"	"	
PCB-1248	"	ND	—	9.69	"	"	"	"	"	
PCB-1254	"	ND	—	9.69	"	"	"	"	"	
PCB-1260	"	ND	—	9.69	"	"	"	"	09/17/09 16:13	

Surrogate(s): TCX 68.6% 27.9 - 154 % " "
Decachlorobiphenyl 18.2% 35 - 157 % " " Z

SSH0168-24 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
PCB-1016	EPA 8082	ND	—	9.76	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 16:36	
PCB-1221	"	ND	—	9.76	"	"	"	"	09/17/09 16:13	
PCB-1232	"	ND	—	9.76	"	"	"	"	"	
PCB-1242	"	ND	—	9.76	"	"	"	"	"	
PCB-1248	"	ND	—	9.76	"	"	"	"	"	
PCB-1254	"	ND	—	9.76	"	"	"	"	"	
PCB-1260	"	26.5	—	9.76	"	"	"	"	09/17/09 16:36	

Surrogate(s): TCX 126% 27.9 - 154 % " "
Decachlorobiphenyl 10.5% 35 - 157 % " " Z

SSH0168-25 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
PCB-1016	EPA 8082	ND	—	9.86	ug/kg dry	1x	9090086	09/14/09 07:36	09/17/09 14:43	
PCB-1221	"	ND	—	9.86	"	"	"	"	"	
PCB-1232	"	ND	—	9.86	"	"	"	"	"	
PCB-1242	"	ND	—	9.86	"	"	"	"	"	
PCB-1248	"	ND	—	9.86	"	"	"	"	"	
PCB-1254	"	ND	—	9.86	"	"	"	"	"	
PCB-1260	"	ND	—	9.86	"	"	"	"	"	

Surrogate(s): TCX 78.0% 27.9 - 154 % " "
Decachlorobiphenyl 68.4% 35 - 157 % " "

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil							Sampled: 08/27/09 09:40	
Bis(2-chloroethyl)ether	E270C STD Dry	ND	0.13	1.4	mg/Kg dry	10x	50040	09/10/09 17:24	09/14/09 18:22	
Phenol	"	ND	0.10	1.4	"	"	"	"	"	
2-Chlorophenol	"	ND	0.10	1.4	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.076	2.7	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.097	0.68	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.13	1.4	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.043	0.68	"	"	"	"	"	
Hexachloroethane	"	ND	0.15	1.4	"	"	"	"	"	
Benzyl alcohol	"	ND	0.13	1.4	"	"	"	"	"	
Dibenzofuran	"	0.56	0.020	1.4	"	"	"	"	"	J
Nitrobenzene	"	ND	0.39	1.4	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.087	0.68	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.034	1.4	"	"	"	"	"	
Isophorone	"	ND	0.055	1.4	"	"	"	"	"	
2-Methylphenol	"	ND	0.096	1.4	"	"	"	"	"	
2-Nitrophenol	"	ND	0.058	1.4	"	"	"	"	"	
Diethyl phthalate	"	ND	0.20	1.4	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.028	1.4	"	"	"	"	"	
Benzoic acid	"	ND	N/A	34	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.096	1.4	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.041	1.4	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.041	1.4	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.031	0.27	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.16	0.68	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.025	1.4	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.054	2.0	"	"	"	"	"	
Fluoranthene	"	1.0	0.016	0.27	"	"	"	"	"	
Naphthalene	"	ND	0.030	0.27	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.058	1.4	"	"	"	"	"	
4-Chloroaniline	"	ND	0.15	1.4	"	"	"	"	"	
Pyrene	"	1.5	0.019	0.27	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.024	0.27	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.42	1.4	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.12	0.68	"	"	"	"	"	
2-Nitroaniline	"	ND	0.057	1.4	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.057	1.4	"	"	"	"	"	
Acenaphthylene	"	ND	0.022	0.27	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.055	1.4	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil							Sampled: 08/27/09 09:40	
3-Nitroaniline	8270C STD Dry	ND	0.078	1.4	mg/Kg dry	10x	50040	09/10/09 17:24	09/14/09 18:22	
4-Chlorophenyl phenyl ether	"	ND	0.077	1.4	"	"	"	"	"	
Acenaphthene	"	1.6	0.022	0.27	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.19	14	"	"	"	"	"	
Fluorene	"	4.5	0.016	0.27	"	"	"	"	"	
4-Nitroaniline	"	ND	0.19	1.4	"	"	"	"	"	
4-Nitrophenol	"	ND	2.3	14	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.24	14	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND <i>UT</i>	0.030	0.68	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.043	1.4	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.051	0.68	"	"	"	"	"	
Pentachlorophenol	"	ND	0.16	1.4	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.11	2.7	"	"	"	"	"	
Phenanthrene	"	ND	0.028	0.27	"	"	"	"	"	
Anthracene	"	ND	0.019	0.27	"	"	"	"	"	
Benzo[a]anthracene	"	0.36	0.023	0.34	"	"	"	"	"	
Chrysene	"	1.9	0.019	0.34	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.35	2.7	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.57	20	"	"	"	"	"	
Di-n-octyl phthalate	"	0.88	0.018	2.7	"	"	"	"	"	<i>J.B.</i>
Benzo[a]pyrene	"	0.59	0.028	0.41	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.057	0.54	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.030	0.54	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.020	0.34	"	"	"	"	"	
Carbazole	"	ND <i>UT</i>	0.058	2.0	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.024	0.41	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.055	0.27	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.018	0.34	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.091	2.0	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	0%		36 - 145 %	"			"	"	X
	Phenol-d5	0%		38 - 149 %	"			"	"	X
	Nitrobenzene-d5	0%		38 - 141 %	"			"	"	X
	2-Fluorobiphenyl	0%		42 - 140 %	"			"	"	X
	2,4,6-Tribromophenol	0%		28 - 143 %	"			"	"	X
	Terphenyl-d14	0%		42 - 151 %	"			"	"	X

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name:	Avery Landing	
18300 NE Union Hill Rd. Suite 200	Project Number:	073-93312-03	Report Created:
Redmond, WA 98077	Project Manager:	Doug Morell	10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-02 (GTP1-13.5-082709)		Soil						Sampled: 08/27/09 10:10		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.11	1.1	mg/Kg dry	10x	50040	09/10/09 17:24	09/14/09 18:42	
Phenol	"	ND	0.079	1.1	"	"	"	"	"	
2-Chlorophenol	"	ND	0.079	1.1	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.060	2.1	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.077	0.54	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.10	1.1	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.034	0.54	"	"	"	"	"	
Hexachloroethane	"	ND	0.12	1.1	"	"	"	"	"	
Benzyl alcohol	"	ND	0.10	1.1	"	"	"	"	"	
Dibenzofuran	"	ND	0.016	1.1	"	"	"	"	"	
Nitrobenzene	"	ND	0.31	1.1	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.069	0.54	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.027	1.1	"	"	"	"	"	
Isophorone	"	ND	0.044	1.1	"	"	"	"	"	
2-Methylphenol	"	ND	0.076	1.1	"	"	"	"	"	
2-Nitrophenol	"	ND	0.046	1.1	"	"	"	"	"	
Diethyl phthalate	"	ND	0.16	1.1	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.023	1.1	"	"	"	"	"	
Benzoic acid	"	ND	7.0	27	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.076	1.1	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.032	1.1	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.032	1.1	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.025	0.21	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.13	0.54	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.028	1.1	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.043	1.6	"	"	"	"	"	
Fluoranthene	"	0.13 J	0.013	0.21	"	"	"	"	"	J
Naphthalene	"	ND	0.024	0.21	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.046	1.1	"	"	"	"	"	
4-Chloroaniline	"	ND	0.72	1.1	"	"	"	"	"	
Pyrene	"	0.19 J	0.015	0.21	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.019	0.21	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.33	1.1	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.098	0.54	"	"	"	"	"	
2-Nitroaniline	"	ND	0.045	1.1	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.045	1.1	"	"	"	"	"	
Acenaphthylene	"	ND	0.017	0.21	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.044	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-02 (GTP1-13.5-082709)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.062	1.1	mg/Kg dry	10x	50040	09/10/09 17:24	09/14/09 18:42	
4-Chlorophenyl phenyl ether	"	ND	0.061	1.1	"	"	"	"	"	
Acenaphthene	"	ND	0.017	0.21	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.15	11	"	"	"	"	"	
Fluorene	"	0.38	0.013	0.21	"	"	"	"	"	
4-Nitroaniline	"	ND	0.15	1.1	"	"	"	"	"	
4-Nitrophenol	"	ND	1.8	11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.19	11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.024	0.54	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.035	1.1	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.041	0.54	"	"	"	"	"	
Pentachlorophenol	"	ND	0.13	1.1	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.085	2.1	"	"	"	"	"	
Phenanthrene	"	ND	0.023	0.21	"	"	"	"	"	
Anthracene	"	ND	0.015	0.21	"	"	"	"	"	
Benzo[a]anthracene	"	0.062	0.018	0.27	"	"	"	"	"	J
Chrysene	"	0.34	0.015	0.27	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.28	2.1	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.45	16	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.014	2.1	"	"	"	"	"	
Benzo[a]pyrene	"	0.057	0.023	0.32	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.045	0.43	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.024	0.43	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.016	0.27	"	"	"	"	"	
Carbazole	"	ND	0.046	1.6	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.019	0.32	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.044	0.21	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.014	0.27	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.072	1.6	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	0%		36 - 145 %	"			"	"	X
	Phenol-d5	0%		38 - 149 %	"			"	"	X
	Nitrobenzene-d5	0%		38 - 141 %	"			"	"	X
	2-Fluorobiphenyl	0%		42 - 140 %	"			"	"	X
	2,4,6-Tribromophenol	0%		28 - 143 %	"			"	"	X
	Terphenyl-d14	0%		42 - 151 %	"			"	"	X

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-03 (GTP3-3.5-082709)		Soil						Sampled: 08/27/09 14:15		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0022	0.022	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 19:03	
Phenol	"	ND	0.0016	0.022	"	"	"	"	"	
2-Chlorophenol	"	ND	0.0016	0.022	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0012	0.044	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0016	0.011	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0021	0.022	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00070	0.011	"	"	"	"	"	
Hexachloroethane	"	ND	0.0024	0.022	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0021	0.022	"	"	"	"	"	
Dibenzofuran	"	0.00085	0.00033	0.022	"	"	"	"	"	J
Nitrobenzene	"	ND	0.0063	0.022	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0014	0.011	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00055	0.022	"	"	"	"	"	
Isophorone	"	ND	0.00089	0.022	"	"	"	"	"	
2-Methylphenol	"	ND	0.0015	0.022	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00094	0.022	"	"	"	"	"	
Diethyl phthalate	"	0.0036	0.0033	0.022	"	"	"	"	"	J
2,4-Dimethylphenol	"	ND	0.00046	0.022	"	"	"	"	"	
Benzoic acid	"	ND	0.14	0.55	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.0015	0.022	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00065	0.022	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00065	0.022	"	"	"	"	"	
2-Methylnaphthalene	"	0.0023	0.00050	0.0044	"	"	"	"	"	J
1,2,4-Trichlorobenzene	"	ND	0.0026	0.011	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00057	0.022	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00087	0.033	"	"	"	"	"	
Fluoranthene	"	0.015	0.00026	0.0044	"	"	"	"	"	
Naphthalene	"	0.0012	0.00048	0.0044	"	"	"	"	"	J
2,4,5-Trichlorophenol	"	ND	0.00094	0.022	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0024	0.022	"	"	"	"	"	
Pyrene	"	0.013	0.00031	0.0044	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00039	0.0044	"	"	"	"	"	
Butyl benzyl phthalate	"	0.014	0.0068	0.022	"	"	"	"	"	J
Hexachlorobutadiene	"	ND	0.0020	0.011	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00092	0.022	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00092	0.022	"	"	"	"	"	
Acenaphthylene	"	ND	0.00035	0.0044	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00089	0.022	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-03 (GTP3-3.5-082709)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.0013	0.022	mg/kg dry	1x	50040	09/10/09 17:24	09/14/09 19:03	
4-Chlorophenyl phenyl ether	"	ND	0.0012	0.022	"	"	"	"	"	
Acenaphthene	"	0.00082	0.00035	0.0044	"	"	"	"	"	J
2,4-Dinitrophenol	"	ND	0.0031	0.22	"	"	"	"	"	
Fluorene	"	0.0014	0.00026	0.0044	"	"	"	"	"	J
4-Nitroaniline	"	ND	0.0031	0.022	"	"	"	"	"	
4-Nitrophenol	"	ND	0.037	0.22	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0039	0.22	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00048	0.011	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00073	0.022	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00083	0.011	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0026	0.022	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0017	0.044	"	"	"	"	"	
Phenanthrene	"	0.0092	0.00046	0.0044	"	"	"	"	"	
Anthracene	"	0.0016	0.00031	0.0044	"	"	"	"	"	J
Benzo[a]anthracene	"	0.0073	0.00037	0.0055	"	"	"	"	"	
Chrysene	"	0.010	0.00031	0.0055	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0080	0.0057	0.044	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	0.12	0.0092	0.33	"	"	"	"	"	J
Di-n-octyl phthalate	"	ND	0.00028	0.044	"	"	"	"	"	
Benzo[a]pyrene	"	0.0065	0.00046	0.0065	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	0.0041	0.00092	0.0087	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	0.0014	0.00048	0.0087	"	"	"	"	"	J
Benzo[g,h,i]perylene	"	0.0066	0.00033	0.0055	"	"	"	"	"	
Carbazole	"	0.0015	0.00094	0.033	"	"	"	"	"	J, *
1-Methylnaphthalene	"	0.0010	0.00039	0.0065	"	"	"	"	"	J
Benzo[b]fluoranthene	"	0.0099	0.00089	0.0044	"	"	"	"	"	
Benzo[k]fluoranthene	"	0.0028	0.00028	0.0055	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.0015	0.033	"	"	"	"	"	
Surrogate(s): 2-Fluorophenol		84%		36 - 145 %	"					
Phenol-d5		71%		38 - 149 %	"					
Nitrobenzene-d5		84%		38 - 141 %	"					
2-Fluorobiphenyl		79%		42 - 140 %	"					
2,4,6-Tribromophenol		94%		28 - 143 %	"					
Terphenyl-d14		82%		42 - 151 %	"					

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04 (GTP3-5-082709)		Soil							Sampled: 08/27/09 14:35	
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0027	0.027	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 19:23	
Phenol	"	ND	0.0020	0.027	"	"	"	"	"	
2-Chlorophenol	"	ND	0.0020	0.027	"	"	"	"	"	
3 & 4 Methylphenol	"	0.066	0.0015	0.055	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0020	0.014	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0026	0.027	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00087	0.014	"	"	"	"	"	
Hexachloroethane	"	ND	0.0030	0.027	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0026	0.027	"	"	"	"	"	
Dibenzofuran	"	ND	0.00041	0.027	"	"	"	"	"	
Nitrobenzene	"	ND	0.0079	0.027	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.0017	0.014	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00068	0.027	"	"	"	"	"	
Isophorone	"	ND	0.0011	0.027	"	"	"	"	"	
2-Methylphenol	"	0.0050	0.0019	0.027	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0012	0.027	"	"	"	"	"	
Diethyl phthalate	"	ND	0.0041	0.027	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00057	0.027	"	"	"	"	"	
Benzoic acid	"	ND	0.18	0.68	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.0019	0.027	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00082	0.027	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00082	0.027	"	"	"	"	"	
2-Methylnaphthalene	"	0.013	0.00063	0.0055	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0033	0.014	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00071	0.027	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0011	0.041	"	"	"	"	"	
Fluoranthene	"	0.077	0.00033	0.0055	"	"	"	"	"	
Naphthalene	"	0.0065	0.00060	0.0055	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.0012	0.027	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0030	0.027	"	"	"	"	"	
Pyrene	"	0.094	0.00038	0.0055	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00049	0.0055	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0083	0.027	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0025	0.014	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0011	0.027	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0011	0.027	"	"	"	"	"	
Acenaphthylene	"	ND	0.00044	0.0055	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0011	0.027	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
3-Nitroaniline	8270C STD Dry	ND	0.0016	0.027	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 19:23	
4-Chlorophenyl phenyl ether	"	ND	0.0016	0.027	"	"	"	"	"	
Acenaphthene	"	ND	0.00144	0.0055	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0038	0.27	"	"	"	"	"	
Fluorene	"	0.012	0.00133	0.0055	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0038	0.027	"	"	"	"	"	
4-Nitrophenol	"	ND	0.046	0.27	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0049	0.27	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00060	0.014	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00090	0.027	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0010	0.014	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0033	0.027	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0022	0.055	"	"	"	"	"	
Phenanthrene	"	0.083	0.00057	0.0055	"	"	"	"	"	
Anthracene	"	ND	0.00038	0.0055	"	"	"	"	"	
Benzo[a]anthracene	"	0.049	0.00046	0.0068	"	"	"	"	"	
Chrysene	"	0.10	0.00038	0.0068	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.0071	0.055	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	0.30	0.011	0.41	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00035	0.055	"	"	"	"	"	
Benzo[a]pyrene	"	0.037	0.00057	0.0082	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	0.018	0.0011	0.011	"	"	"	"	"	
Dibenz[a,h]anthracene	"	0.0081	0.00060	0.011	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.021	0.00041	0.0068	"	"	"	"	"	
Carbazole	"	ND	0.0012	0.041	"	"	"	"	"	
1-Methylnaphthalene	"	0.012	0.00049	0.0082	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.054	0.0011	0.0055	"	"	"	"	"	
Benzo[k]fluoranthene	"	0.011	0.00035	0.0068	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.0018	0.041	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	88%		36 - 145 %	"					
	Phenol-d5	75%		38 - 149 %	"					
	Nitrobenzene-d5	82%		38 - 141 %	"					
	2-Fluorobiphenyl	70%		42 - 140 %	"					
	2,4,6-Tribromophenol	99%		28 - 143 %	"					
	Terphenyl-d14	91%		42 - 151 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-05 (GTP3-13.5-082709)		Soil							Sampled: 08/27/09 14:49	
Bis(2-chloromethyl)ether	8270C STD Dry	ND	0.0026	0.026	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 20:25	
Phenol	"	ND	0.0019	0.026	"	"	"	"	"	
2-Chlorophenol	"	ND	0.0019	0.026	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0015	0.052	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0019	0.013	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0025	0.026	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00083	0.013	"	"	"	"	"	
Hexachloroethane	"	ND	0.0029	0.026	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0025	0.026	"	"	"	"	"	
Dibenzofuran	"	ND	0.00039	0.026	"	"	"	"	"	
Nitrobenzene	"	ND	0.0075	0.026	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.0017	0.013	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00065	0.026	"	"	"	"	"	
Isophorone	"	ND	0.0011	0.026	"	"	"	"	"	
2-Methylphenol	"	ND	0.0018	0.026	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0011	0.026	"	"	"	"	"	
Diethyl phthalate	"	0.0069	0.0039	0.026	u	"	"	"	"	J, B
2,4-Dimethylphenol	"	ND	0.00055	0.026	"	"	"	"	"	
Benzoic acid	"	ND	0.17	0.65	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.0018	0.026	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00078	0.026	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00078	0.026	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.00060	0.0052	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0031	0.013	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00068	0.026	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0010	0.039	"	"	"	"	"	
Fluoranthene	"	0.0021	0.00031	0.0052	"	"	"	"	"	J
Naphthalene	"	ND	0.00057	0.0052	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.0011	0.026	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0029	0.026	"	"	"	"	"	
Pyrene	"	0.0046	0.00036	0.0052	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.00047	0.0052	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0081	0.026	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0024	0.013	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0011	0.026	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0011	0.026	"	"	"	"	"	
Acenaphthylene	"	ND	0.00042	0.0052	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0011	0.026	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	
18300 NE Union Hill Rd, Suite 200	Project Number: 073-93312-03	Report Created:
Redmond, WA 98077	Project Manager: Doug Morell	10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-05 (GTP3-13.5-082709)		Soil							Sampled: 08/27/09 14:49	
3-Nitroaniline	8270C STD Dry	ND	0.0015	0.026	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 20:25	
4-Chlorophenyl phenyl ether	"	ND	0.0015	0.026	"	"	"	"	"	
Acenaphthene	"	ND	0.00047	0.0052	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0036	0.26	"	"	"	"	"	
Fluorene	"	ND	0.00031	0.0052	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0036	0.026	"	"	"	"	"	
4-Nitrophenol	"	ND	0.044	0.26	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0047	0.26	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND <i>u</i>	0.00057	0.013	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00086	0.026	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00099	0.013	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0031	0.026	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0021	0.052	"	"	"	"	"	
Phenanthrene	"	ND	0.00055	0.0052	"	"	"	"	"	
Anthracene	"	ND	0.00036	0.0052	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.00044	0.0065	"	"	"	"	"	
Chrysene	"	0.012	0.00036	0.0065	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0001	0.0068	0.052	<i>u</i>	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.011	0.39	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00034	0.052	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.00055	0.0078	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0011	0.010	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.00057	0.010	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.00039	0.0065	"	"	"	"	"	
Carbazole	"	ND <i>u</i>	0.0011	0.039	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.00047	0.0078	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0011	0.0052	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.00034	0.0065	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.0017	0.039	"	"	"	"	"	
Surrogate(s):										
2-Fluorophenol		81%			36 - 145 %	"			"	
Phenol-d5		81%			38 - 149 %	"			"	
Nitrobenzene-d5		82%			38 - 141 %	"			"	
2-Fluorobiphenyl		79%			42 - 140 %	"			"	
2,4,6-Tribromophenol		98%			28 - 143 %	"			"	
Terphenyl-d14		81%			42 - 151 %	"			"	

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/01/09 10:07
Redmond, WA 98077	Project Manager: Doug Moreli	

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-06 (GTP4-2.5-082709)		Soil						Sampled: 08/27/09 15:40		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0021	0.021	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 20:46	
Phenol	"	ND	0.0015	0.021	"	"	"	"	"	
2-Chlorophenol	"	ND	0.0015	0.021	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0012	0.042	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0015	0.010	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0020	0.021	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00067	0.010	"	"	"	"	"	
Hexachloroethane	"	ND	0.0023	0.021	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0020	0.021	"	"	"	"	"	
Dibenzofuran	"	ND	0.00031	0.021	"	"	"	"	"	
Nitrobenzene	"	ND	0.0061	0.021	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.0013	0.010	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00032	0.021	"	"	"	"	"	
Isophorone	"	ND	0.00086	0.021	"	"	"	"	"	
2-Methylphenol	"	ND	0.0015	0.021	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00090	0.021	"	"	"	"	"	
Diethyl phthalate	"	0.0036	0.0031	0.021	UL	"	"	"	"	J. D.
2,4-Dimethylphenol	"	ND	0.00044	0.021	"	"	"	"	"	
Benzoic acid	"	0.15	0.14	0.52	"	"	"	"	"	J
4-Chloro-3-methylphenol	"	ND	0.0015	0.021	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00063	0.021	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00063	0.021	"	"	"	"	"	
2-Methylnaphthalene	"	0.015	0.00048	0.0042	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0025	0.010	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00134	0.021	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00084	0.031	"	"	"	"	"	
Fluoranthene	"	0.0082	0.00025	0.0042	"	"	"	"	"	
Naphthalene	"	0.0076	0.00046	0.0042	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00090	0.021	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0023	0.021	"	"	"	"	"	
Pyrene	"	0.0099	0.00029	0.0042	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00038	0.0042	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0065	0.021	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0019	0.010	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00088	0.021	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00088	0.021	"	"	"	"	"	
Acenaphthylene	"	0.0025	0.00033	0.0042	"	"	"	"	"	J
2,6-Dinitrotoluene	"	ND	0.00086	0.021	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatiles by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
3-Nitroaniline	8270C STD Dry	ND	0.0012	0.021	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 20:46	
4-Chlorophenyl phenyl ether	"	ND	0.0012	0.021	"	"	"	"	"	
Acenaphthene	"	ND	0.00033	0.0042	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0029	0.21	"	"	"	"	"	
Fluorene	"	ND	0.00025	0.0042	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0029	0.021	"	"	"	"	"	
4-Nitrophenol	"	ND	0.036	0.21	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0038	0.21	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00046	0.010	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00069	0.021	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00079	0.010	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0025	0.021	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0017	0.042	"	"	"	"	"	
Phenanthrene	"	0.0064	0.00044	0.0042	"	"	"	"	"	
Anthracene	"	0.0031	0.00029	0.0042	"	"	"	"	"	
Benzo[a]anthracene	"	0.0055	0.00036	0.0052	"	"	"	"	"	
Chrysene	"	0.0081	0.00029	0.0052	"	"	"	"	"	
Di-n-butyl phthalate	"	0.010	0.0054	0.042	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.0088	0.31	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00027	0.042	"	"	"	"	"	
Benzo[a]pyrene	"	0.0071	0.00044	0.0063	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	0.0073	0.00088	0.0084	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.00046	0.0084	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.016	0.00031	0.0052	"	"	"	"	"	
Carbazole	"	0.0018	0.00090	0.031	"	"	"	"	"	
1-Methylnaphthalene	"	0.0086	0.00038	0.0063	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.0099	0.00086	0.0042	"	"	"	"	"	
Benzo[k]fluoranthene	"	0.0023	0.00027	0.0052	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.0014	0.031	"	"	"	"	"	
Surrogate(s): 2-Fluorophenol		63%		36 - 145 %	"					
Phenol-d5		70%		38 - 149 %	"					
Nitrobenzene-d5		85%		38 - 141 %	"					
2-Fluorobiphenyl		78%		42 - 140 %	"					
2,4,6-Tribromophenol		101%		28 - 143 %	"					
Terphenyl-d14		87%		42 - 151 %	"					

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



Golder Associates, Inc.,
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatle Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-8.0-082709)		Soil								
Bis(2-chloromethyl)ether	8278C STD Dry	ND	0.0011	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 21:06	
Phenol	"	ND	0.00084	0.011	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00084	0.011	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00064	0.023	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00082	0.0057	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0011	0.011	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00036	0.0057	"	"	"	"	"	
Hexachloroethane	"	ND	0.0012	0.011	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0011	0.011	"	"	"	"	"	
Dibenzofuran	"	ND	0.00017	0.011	"	"	"	"	"	
Nitrobenzene	"	ND	0.0033	0.011	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00073	0.0057	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00028	0.011	"	"	"	"	"	
Isophorone	"	ND	0.00047	0.011	"	"	"	"	"	
2-Methylphenol	"	ND	0.00081	0.011	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00049	0.011	"	"	"	"	"	
Diethyl phthalate	"	0.0020	0.0017	0.011	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00024	0.011	"	"	"	"	"	
Benzoic acid	"	ND	0.074	0.28	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00081	0.011	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00034	0.011	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00034	0.011	"	"	"	"	"	
2-Methylnaphthalene	"	0.00031	0.00026	0.0023	"	"	"	"	"	J
1,2,4-Trichlorobenzene	"	ND	0.0014	0.0057	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00029	0.011	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00045	0.017	"	"	"	"	"	
Fluoranthene	"	ND	0.00014	0.0023	"	"	"	"	"	
Naphthalene	"	0.00027	0.00025	0.0023	"	"	"	"	"	J
2,4,5-Trichlorophenol	"	ND	0.00049	0.011	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0012	0.011	"	"	"	"	"	
Pyrene	"	ND	0.00016	0.0023	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00020	0.0023	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0033	0.011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0010	0.0057	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00048	0.011	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00048	0.011	"	"	"	"	"	
Acenaphthylene	"	ND	0.00018	0.0023	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00047	0.011	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
3-Nitroaniline	8270C STD Dry	ND	0.00066	0.011	mg/kg dry	1x	50040	09/10/09 17:24	09/14/09 21:06	
4-Chlorophenyl phenyl ether	"	ND	0.00065	0.011	"	"	"	"	"	
Acenaphthene	"	ND	0.00018	0.0023	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0016	0.11	"	"	"	"	"	
Fluorene	"	ND	0.00014	0.0023	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0016	0.011	"	"	"	"	"	
4-Nitrophenol	"	ND	0.019	0.11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0020	0.11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND UT	0.00025	0.0057	"	"	"	"	"	*
4-Bromophenyl phenyl ether	"	ND	0.00037	0.011	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00043	0.0057	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0014	0.011	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00040	0.023	"	"	"	"	"	
Phenanthrene	"	ND	0.00024	0.0023	"	"	"	"	"	
Anthracene	"	ND	0.00016	0.0023	"	"	"	"	"	
Benzo[a]anthracene	"	0.00068	0.00019	0.0028	"	"	"	"	"	J
Chrysene	"	0.00045	0.00016	0.0028	"	"	"	"	"	J
Di-n-butyl phthalate	"	0.0061	0.0029	0.023	"	"	"	"	"	J
Bis(2-ethylhexyl) phthalate	"	ND	0.0048	0.17	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00015	0.023	"	"	"	"	"	
Benzo[a]pyrene	"	0.0013	0.00024	0.0034	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	0.00060	0.00048	0.0045	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	ND	0.00025	0.0045	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.00017	0.0028	"	"	"	"	"	
Carbazole	"	ND UT	0.00049	0.017	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.00020	0.0034	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.00082	0.00047	0.0023	"	"	"	"	"	J
Benzo[k]fluoranthene	"	0.00019	0.00015	0.0028	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.00076	0.017	"	"	"	"	"	
Surrogate(s): 2-Fluorophenol		71%		36 - 145 %	"					
Phenol-d5		80%		38 - 149 %	"					
Nitrobenzene-d5		80%		38 - 141 %	"					
2-Fluorobiphenyl		80%		42 - 140 %	"					
2,4,6-Tribromophenol		99%		28 - 143 %	"					
Terphenyl-d14		84%		42 - 151 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-09 (GTP5-3.0-082709)		Soil					Sampled: 08/27/09 16:40			
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0011	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 21:27	
Phenol	"	ND	0.00080	0.011	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00080	0.011	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00060	0.022	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00078	0.0054	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0010	0.011	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00034	0.0054	"	"	"	"	"	
Hexachloroethane	"	ND	0.0012	0.011	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0010	0.011	"	"	"	"	"	
Dibenzofuran	"	ND	0.00016	0.011	"	"	"	"	"	
Nitrobenzene	"	ND	0.0031	0.011	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00069	0.0054	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00027	0.011	"	"	"	"	"	
Isophorone	"	ND	0.00044	0.011	"	"	"	"	"	
2-Methylphenol	"	ND	0.00076	0.011	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00046	0.011	"	"	"	"	"	
Diethyl phthalate	"	0.0025	0.0016	0.011	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00023	0.011	"	"	"	"	"	
Benzoic acid	"	ND	0.070	0.27	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00076	0.011	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00032	0.011	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00032	0.011	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.00025	0.0022	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0013	0.0054	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00028	0.011	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00043	0.016	"	"	"	"	"	
Fluoranthene	"	ND	0.00013	0.0022	"	"	"	"	"	
Naphthalene	"	ND	0.00024	0.0022	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00046	0.011	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0012	0.011	"	"	"	"	"	
Pyrene	"	ND	0.00015	0.0022	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00019	0.0022	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0033	0.011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00098	0.0054	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00045	0.011	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00045	0.011	"	"	"	"	"	
Acenaphthylene	"	ND	0.00017	0.0022	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00044	0.011	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-09 (GTP5-3.0-082709)		Soil							Sampled: 08/27/09 16:40	
3-Nitroaniline	8270C STD Dry	ND	0.00062	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 21:27	
4-Chlorophenyl phenyl ether	"	ND	0.00061	0.011	"	"	"	"	"	
Acenaphthene	"	ND	0.00017	0.0022	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0013	0.11	"	"	"	"	"	
Fluorene	"	ND	0.00013	0.0022	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0015	0.011	"	"	"	"	"	
4-Nitrophenol	"	ND	0.018	0.11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0019	0.11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND UT	0.00024	0.0054	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00036	0.011	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00041	0.0054	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0013	0.011	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00085	0.022	"	"	"	"	"	
Phenanthrene	"	ND	0.00023	0.0022	"	"	"	"	"	
Anthracene	"	ND	0.00015	0.0022	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.00018	0.0027	"	"	"	"	"	
Chrysene	"	ND	0.00015	0.0027	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0097	0.0028	0.022	"	"	"	"	"	J, B
Bis(2-ethylhexyl) phthalate	"	ND	0.0015	0.16	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00014	0.022	"	"	"	"	"	
Benzo[a]pyrene	"	0.00080	0.00023	0.0032	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	0.00065	0.00045	0.0043	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	ND	0.00024	0.0043	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.00086	0.00016	0.0027	"	"	"	"	"	J
Carbazole	"	ND UT	0.00046	0.016	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.00019	0.0032	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.00091	0.00044	0.0022	"	"	"	"	"	J
Benzo[k]fluoranthene	"	0.00016	0.00014	0.0027	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.00072	0.016	"	"	"	"	"	
Surrogate(s):										
2-Fluorophenol		92%			36 - 145 %	"				
Phenol-d5		83%			38 - 149 %	"				
Nitrobenzene-d5		85%			38 - 141 %	"				
2-Fluorobiphenyl		84%			42 - 140 %	"				
2,4,6-Tribromophenol		101%			28 - 143 %	"				
Terphenyl-d14		87%			42 - 151 %	"				



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10 (GTP5-7.0-082709)		Soil								Sampled: 08/27/09 16:53
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0020	0.020	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 21:47	
Phenol	"	ND	0.0015	0.020	"	"	"	"	"	
2-Chlorophenol	"	ND	0.0015	0.020	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0011	0.041	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0015	0.010	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0020	0.020	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00066	0.010	"	"	"	"	"	
Hexachloroethane	"	ND	0.0023	0.020	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0020	0.020	"	"	"	"	"	
Dibenzofuran	"	ND	0.00031	0.020	"	"	"	"	"	
Nitrobenzene	"	ND	0.0059	0.020	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.0013	0.010	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00051	0.020	"	"	"	"	"	
Isophorone	"	ND	0.00084	0.020	"	"	"	"	"	
2-Methylphenol	"	ND	0.0013	0.020	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00088	0.020	"	"	"	"	"	
Diethyl phthalate	"	ND	0.0031	0.020	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00043	0.020	"	"	"	"	"	
Benzoic acid	"	ND	0.13	0.51	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.0015	0.020	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00061	0.020	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00061	0.020	"	"	"	"	"	
2-Methylnaphthalene	"	0.010	0.00047	0.0041	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0025	0.010	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00053	0.020	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00082	0.031	"	"	"	"	"	
Fluoranthene	"	ND	0.00025	0.0041	"	"	"	"	"	
Naphthalene	"	0.031	0.00043	0.0041	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00088	0.020	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0023	0.020	"	"	"	"	"	
Pyrene	"	ND	0.00029	0.0041	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00037	0.0041	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.00064	0.020	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0019	0.010	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00086	0.020	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00086	0.020	"	"	"	"	"	
Acenaphthylene	"	ND	0.00033	0.0041	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00084	0.020	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10 (GTP5-7.0-082709)										
3-Nitroaniline	8270C STD Dry	ND	0.0012	0.020	mg/kg dry	1x	50040	09/10/09 17:24	09/14/09 21:47	
4-Chlorophenyl phenyl ether	"	ND	0.0012	0.020	"	"	"	"	"	
Acenaphthene	"	ND	0.00033	0.0041	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0029	0.20	"	"	"	"	"	
Fluorene	"	0.0082	0.00025	0.0041	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0029	0.020	"	"	"	"	"	
4-Nitrophenol	"	ND	0.035	0.20	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0037	0.20	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00043	0.010	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00058	0.020	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00078	0.010	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0023	0.020	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0016	0.041	"	"	"	"	"	
Phenanthrene	"	0.062	0.00043	0.0041	"	"	"	"	"	
Anthracene	"	ND	0.00029	0.0041	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.00035	0.0051	"	"	"	"	"	
Chrysene	"	ND	0.00129	0.0051	"	"	"	"	"	
Di-n-butyl phthalate	"	0.20	0.0053	0.041	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.0006	0.31	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00027	0.041	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.00043	0.0061	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0006	0.0082	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.00045	0.0082	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.00131	0.0051	"	"	"	"	"	
Carbazole	"	ND	0.00088	0.031	"	"	"	"	"	
1-Methylnaphthalene	"	0.016	0.00037	0.0061	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.00084	0.0041	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.00027	0.0051	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.0014	0.031	"	"	"	"	"	
Surrogate(s): 2-Fluorophenol		91%			36 - 145 %	"				
Phenol-d5		87%			38 - 149 %	"				
Nitrobenzene-d15		93%			38 - 141 %	"				
2-Fluorobiphenyl		78%			42 - 140 %	"				
2,4,6-Tribromophenol		102%			28 - 143 %	"				
Terphenyl-d14		48%			42 - 151 %	"				



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
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Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-11 (GTP6-10-082809)		Soil								Sampled: 08/28/09 10:36
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.016	0.16	mg/Kg dry	10x	50040	09/10/09 17:24	09/15/09 16:24	
Phenol	"	ND	0.012	0.16	"	"	"	"	"	
2-Chlorophenol	"	ND	0.012	0.16	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0092	0.33	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.012	0.082	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.016	0.16	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0052	0.082	"	"	"	"	"	
Hexachloroethane	"	ND	0.018	0.16	"	"	"	"	"	
Benzyl alcohol	"	ND	0.016	0.16	"	"	"	"	"	
Dibenzofuran	"	ND	0.0023	0.16	"	"	"	"	"	
Nitrobenzene	"	ND	0.047	0.16	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.010	0.082	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.0041	0.16	"	"	"	"	"	
Isophorone	"	ND	0.0067	0.16	"	"	"	"	"	
2-Methylphenol	"	ND	0.012	0.16	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0070	0.16	"	"	"	"	"	
Diethyl phthalate	"	ND	0.025	0.16	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.0034	0.16	"	"	"	"	"	
Benzoic acid	"	ND	1.1	4.1	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.012	0.16	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.0049	0.16	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.0049	0.16	"	"	"	"	"	
2-Methylnaphthalene	"	78	0.19	1.6	"	500x	"	"	09/15/09 20:13	
1,2,4-Trichlorobenzene	"	ND	0.020	0.082	"	10x	"	"	09/15/09 16:24	
Hexachlorocyclopentadiene	"	ND	0.0043	0.16	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0065	0.25	"	"	"	"	"	
Fluoranthene	"	0.15	0.0020	0.033	"	"	"	"	"	
Naphthalene	"	27	0.18	1.6	"	500x	"	"	09/15/09 20:13	
2,4,5-Trichlorophenol	"	ND	0.0070	0.16	"	10x	"	"	09/15/09 16:24	
4-Chloroaniline	"	ND	0.018	0.16	"	"	"	"	"	
Pyrene	"	0.12	0.0023	0.033	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.0029	0.033	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.051	0.16	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.013	0.082	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0069	0.16	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0069	0.16	"	"	"	"	"	
Acenaphthylene	"	ND	0.0026	0.033	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0067	0.16	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

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Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
3-Nitroaniline	8270C STD Dry	ND	0.0093	0.16	mg/Kg dry	10x	50040	09/10/09 17:24	09/15/09 16:24	
4-Chlorophenyl phenyl ether	"	ND	0.0093	0.16	"	"	"	"	"	
Acenaphthene	"	1.2	0.0026	0.033	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.023	1.6	"	"	"	"	"	
Fluorene	"	2.1	0.0020	0.033	"	"	"	"	"	
4-Nitroaniline	"	ND	0.023	0.16	"	"	"	"	"	
4-Nitrophenol	"	ND	0.28	1.6	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.029	1.6	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.0036	0.082	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.0054	0.16	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0062	0.082	"	"	"	"	"	
Pentachlorophenol	"	ND	0.020	0.16	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.013	0.33	"	"	"	"	"	
Phenanthrene	"	2.4	0.0034	0.033	"	"	"	"	"	
Anthracene	"	ND	0.0023	0.033	"	"	"	"	"	
Benzo[a]anthracene	"	0.026	0.0028	0.041	"	"	"	"	"	
Chrysene	"	0.047	0.0023	0.041	"	"	"	"	"	
Di-n-butyl phthalate	"	0.12	0.043	0.33	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.069	2.5	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.0021	0.33	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0034	0.049	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0069	0.065	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0036	0.065	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0025	0.041	"	"	"	"	"	
Carbazole	"	ND	0.0070	0.25	"	"	"	"	"	
1-Methylnaphthalene	"	45	0.15	2.5	"	500x	"	"	09/15/09 20:13	
Benzo[b]fluoranthene	"	ND	0.0067	0.033	"	10x	"	"	09/15/09 16:24	
Benzo[k]fluoranthene	"	ND	0.0021	0.041	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.011	0.25	"	"	"	"	"	
Surrogate(s): 2-Fluorophenol		0%		36 - 145 %	"	"	"	"	"	D. X
Phenol-d5		0%		38 - 149 %	"	"	"	"	"	D. X
Nitrobenzene-d5		0%		38 - 141 %	"	"	"	"	"	D. X
2-Fluorobiphenyl		0%		42 - 140 %	"	"	"	"	"	D. X
2,4,6-Tribromophenol		0%		28 - 143 %	"	"	"	"	"	D. X
Terphenyl-d14		0%		42 - 151 %	"	"	"	"	"	D. X

TestAmerica Spokane

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Randee Decker, Project Manager



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Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-12 (GTP6-2.5-082809)										
		Soil							Sampled: 08/28/09 10:10	
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0011	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 22:28	
Phenol	"	ND	0.00082	0.011	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00082	0.011	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00062	0.022	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00080	0.0056	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0011	0.011	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00036	0.0056	"	"	"	"	"	
Hexachloroethane	"	ND	0.0012	0.011	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0011	0.011	"	"	"	"	"	
Dibenzofuran	"	ND	0.00017	0.011	"	"	"	"	"	
Nitrobenzene	"	ND	0.0032	0.011	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00071	0.0056	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00028	0.011	"	"	"	"	"	
Isophorone	"	ND	0.00046	0.011	"	"	"	"	"	
2-Methylphenol	"	ND	0.00079	0.011	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00048	0.011	"	"	"	"	"	
Diethyl phthalate	"	0.0025	0.0017	0.011	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00023	0.011	"	"	"	"	"	
Benzoic acid	"	ND	0.072	0.28	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00079	0.011	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00033	0.011	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00033	0.011	"	"	"	"	"	
2-Methylnaphthalene	"	0.0020	0.00026	0.0022	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0013	0.0056	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00029	0.011	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00045	0.017	"	"	"	"	"	
Fluoranthene	"	ND	0.00013	0.0022	"	"	"	"	"	
Naphthalene	"	0.0011	0.00024	0.0022	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00048	0.011	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0012	0.011	"	"	"	"	"	
Pyrene	"	ND	0.00016	0.0022	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00030	0.0022	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0034	0.011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0019	0.0056	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00047	0.011	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00047	0.011	"	"	"	"	"	
Acenaphthylene	"	ND	0.00018	0.0022	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00046	0.011	"	"	"	"	"	

TestAmerica Spokane

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[Signature]

Randee Decker, Project Manager



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Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-12 (GTP6-2.5-082809)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.00063	0.011	mg/kg dry	1x	50040	09/10/09 17:24	09/14/09 22:28	
4-Chlorophenyl phenyl ether	"	ND	0.00063	0.011	"	"	"	"	"	
Acenaphthene	"	ND	0.00018	0.0022	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0016	0.11	"	"	"	"	"	
Fluorene	"	ND	0.00013	0.0032	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0016	0.011	"	"	"	"	"	
4-Nitrophenol	"	ND	0.019	0.11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0020	0.11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00024	0.0056	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00037	0.011	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00042	0.0056	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0013	0.011	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00008	0.022	"	"	"	"	"	
Phenanthrene	"	ND	0.00023	0.0022	"	"	"	"	"	
Anthracene	"	ND	0.00016	0.0022	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.00019	0.0028	"	"	"	"	"	
Chrysene	"	ND	0.00016	0.0028	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0075	0.0029	0.022	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.0047	0.17	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00014	0.022	"	"	"	"	"	
Benzo[a]pyrene	"	0.0016	0.00023	0.0033	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	0.00070	0.00047	0.0045	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	ND	0.00024	0.0045	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.0011	0.00017	0.0028	"	"	"	"	"	J
Carbazole	"	ND	0.00048	0.017	"	"	"	"	"	
1-Methylnaphthalene	"	0.0016	0.00020	0.0033	"	"	"	"	"	J
Benzo[b]fluoranthene	"	0.00098	0.00046	0.0022	"	"	"	"	"	J
Benzo[k]fluoranthene	"	0.00038	0.00014	0.0028	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.00073	0.017	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	81%			36 - 145 %	"				
	Phenol-d5	78%			38 - 149 %	"				
	Nitrobenzene-d5	86%			38 - 141 %	"				
	2-Fluorobiphenyl	75%			42 - 140 %	"				
	2,4,6-Tribromophenol	98%			28 - 143 %	"				
	Terphenyl-d14	84%			42 - 151 %	"				

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0028	0.028	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 22:49	
Phenol	"	0.0095	0.0021	0.028	"	"	"	"	"	J
2-Chlorophenol	"	ND	0.0021	0.028	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0016	0.056	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0020	0.014	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0027	0.028	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00090	0.014	"	"	"	"	"	
Hexachloroethane	"	ND	0.0031	0.028	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0027	0.028	"	"	"	"	"	
Dibenzofuran	"	ND	0.00042	0.028	"	"	"	"	"	
Nitrobenzene	"	ND	0.0081	0.028	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.0018	0.014	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00070	0.028	"	"	"	"	"	
Isophorone	"	ND	0.0011	0.028	"	"	"	"	"	
2-Methylphenol	"	ND	0.0020	0.028	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0012	0.028	"	"	"	"	"	
Diethyl phthalate	"	ND	0.0042	0.028	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00059	0.028	"	"	"	"	"	
Benzoic acid	"	ND	0.18	0.70	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.0020	0.028	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00084	0.028	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00084	0.028	"	"	"	"	"	
2-Methylnaphthalene	"	0.48	0.00064	0.0056	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0034	0.014	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00073	0.028	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0011	0.042	"	"	"	"	"	
Fluoranthene	"	0.040	0.00034	0.0056	"	"	"	"	"	
Naphthalene	"	0.096	0.00062	0.0056	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.0012	0.028	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0031	0.028	"	"	"	"	"	
Pyrene	"	0.083	0.00039	0.0056	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00050	0.0056	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0087	0.028	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0025	0.014	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0012	0.028	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0012	0.028	"	"	"	"	"	
Acenaphthylene	"	ND	0.00045	0.0056	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0011	0.028	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-13 (GTP6-17-082809)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.0016	0.028	ng/Kg dry	1x	S0040	09/10/09 17:24	09/14/09 22:49	
4-Chlorophenyl phenyl ether	"	ND	0.0016	0.028	"	"	"	"	"	
Acenaphthene	"	0.029	0.00045	0.0056	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0039	0.28	"	"	"	"	"	
Fluorene	"	0.032	0.00034	0.0056	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0039	0.028	"	"	"	"	"	
4-Nitrophenol	"	ND	0.048	0.28	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0050	0.28	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00062	0.014	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00092	0.028	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0011	0.014	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0034	0.028	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0023	0.056	"	"	"	"	"	
Phenanthrene	"	0.051	0.00059	0.0056	"	"	"	"	"	
Anthracene	"	0.0088	0.00039	0.0056	"	"	"	"	"	
Benzo[a]anthracene	"	0.051	0.00048	0.0070	"	"	"	"	"	
Chrysene	"	0.069	0.00039	0.0070	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.0073	0.056	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.012	0.42	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00036	0.056	"	"	"	"	"	
Benzo[a]pyrene	"	0.041	0.00039	0.0084	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	0.013	0.0012	0.011	"	"	"	"	"	
Dibenz[a,h]anthracene	"	0.0079	0.00062	0.011	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.024	0.00042	0.0070	"	"	"	"	"	
Carbazole	"	ND	0.0012	0.042	"	"	"	"	"	
1-Methylnaphthalene	"	0.33	0.00050	0.0084	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.049	0.0011	0.0056	"	"	"	"	"	
Benzo[k]fluoranthene	"	0.012	0.00036	0.0070	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.0019	0.042	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	83%			36 - 145 %	"				
	Phenol-d5	73%			38 - 149 %	"				
	Nitrobenzene-d5	75%			38 - 141 %	"				
	2-Fluorobiphenyl	80%			42 - 140 %	"				
	2,4,6-Tribromophenol	98%			28 - 143 %	"				
	Terphenyl-d14	88%			42 - 151 %	"				



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)		Soil						Sampled: 08/28/09 12:50		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0011	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 23:09	
Phenol	"	ND	0.00079	0.011	"	"	"	"	"	
3-Chlorophenol	"	ND	0.00079	0.011	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00160	0.021	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00177	0.0053	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0010	0.011	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00034	0.0053	"	"	"	"	"	
Hexachloroethane	"	ND	0.0012	0.011	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0010	0.011	"	"	"	"	"	
Dibenzofuran	"	ND	0.00016	0.011	"	"	"	"	"	
Nitrobenzene	"	ND	0.0031	0.011	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00068	0.0053	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00027	0.011	"	"	"	"	"	
Isophorone	"	ND	0.00044	0.011	"	"	"	"	"	
2-Methylphenol	"	ND	0.00076	0.011	"	"	"	"	"	
3-Nitrophenol	"	ND	0.00046	0.011	"	"	"	"	"	
Diethyl phthalate	"	0.0026	0.0016	0.011	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00022	0.011	"	"	"	"	"	
Benzoic acid	"	ND	0.069	0.27	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00076	0.011	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00032	0.011	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00032	0.011	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.00024	0.0021	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0013	0.0053	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00028	0.011	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00043	0.016	"	"	"	"	"	
Fluoranthene	"	0.0012	0.0013	0.0021	"	"	"	"	"	J
Naphthalene	"	0.00040	0.00023	0.0021	"	"	"	"	"	J
2,4,5-Trichlorophenol	"	ND	0.00046	0.011	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0013	0.011	"	"	"	"	"	
Pyrene	"	0.0015	0.00015	0.0021	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.00019	0.0021	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0033	0.011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00097	0.0053	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00045	0.011	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00045	0.011	"	"	"	"	"	
Acenaphthylene	"	0.00076	0.00017	0.0021	"	"	"	"	"	J
2,6-Dinitrotoluene	"	ND	0.00044	0.011	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.00062	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 23:09	
4-Chlorophenyl phenyl ether	"	ND	0.00061	0.011	"	"	"	"	"	
Acenaphthene	"	ND	0.00017	0.0021	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0015	0.11	"	"	"	"	"	
Fluorene	"	ND	0.00013	0.0021	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0015	0.011	"	"	"	"	"	
4-Nitrophenol	"	ND	0.018	0.11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0019	0.11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00023	0.0053	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00035	0.011	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00040	0.0053	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0013	0.011	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00084	0.021	"	"	"	"	"	
Phenanthrene	"	ND	0.00022	0.0021	"	"	"	"	"	
Anthracene	"	ND	0.00015	0.0021	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.00018	0.0027	"	"	"	"	"	
Chrysene	"	ND	0.00015	0.0027	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0084	0.0028	0.021	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.0045	0.16	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00014	0.021	"	"	"	"	"	
Benzo[a]pyrene	"	0.0016	0.00022	0.0032	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	0.0014	0.00045	0.0043	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	ND	0.00023	0.0043	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.0017	0.00016	0.0027	"	"	"	"	"	J
Carbazole	"	0.00059	0.00046	0.016	"	"	"	"	"	J, *
1-Methylnaphthalene	"	ND	0.00019	0.0032	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.0021	0.00044	0.0021	"	"	"	"	"	J
Benzo[k]fluoranthene	"	0.00052	0.00014	0.0027	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.00071	0.016	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	63%			36 - 145 %	"				
	Phenol-d5	71%			38 - 149 %	"				
	Nitrobenzene-d5	77%			38 - 141 %	"				
	2-Fluorobiphenyl	75%			42 - 140 %	"				
	2,4,6-Tribromophenol	100%			28 - 143 %	"				
	Terphenyl-d14	84%			42 - 151 %	"				

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-15 (GTP7-10.0-082809)		Soil					Sampled: 08/28/09 13:27			
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0011	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 23:30	
Phenol	"	ND	0.00080	0.011	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00080	0.011	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00061	0.022	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00078	0.0054	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0010	0.011	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00035	0.0054	"	"	"	"	"	
Hexachloroethane	"	ND	0.0012	0.011	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0010	0.011	"	"	"	"	"	
Dibenzofuran	"	ND	0.00016	0.011	"	"	"	"	"	
Nitrobenzene	"	ND	0.0031	0.011	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00069	0.0054	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00027	0.011	"	"	"	"	"	
Isophorone	"	ND	0.00044	0.011	"	"	"	"	"	
2-Methylphenol	"	ND	0.00077	0.011	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00047	0.011	"	"	"	"	"	
Diethyl phthalate	"	0.0027	0.0016	0.011	u	"	"	"	"	1.8
2,4-Dimethylphenol	"	ND	0.00023	0.011	"	"	"	"	"	
Benzoic acid	"	ND	0.070	0.27	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00077	0.011	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00032	0.011	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00032	0.011	"	"	"	"	"	
2-Methylnaphthalene	"	0.00067	0.00025	0.0022	"	"	"	"	"	J
1,2,4-Trichlorobenzene	"	ND	0.0013	0.0054	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00028	0.011	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00043	0.016	"	"	"	"	"	
Fluoranthene	"	0.0034	0.00013	0.0022	"	"	"	"	"	
Naphthalene	"	0.00048	0.00024	0.0022	"	"	"	"	"	J
2,4,5-Trichlorophenol	"	ND	0.00047	0.011	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0012	0.011	"	"	"	"	"	
Pyrene	"	0.0037	0.00015	0.0022	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00019	0.0022	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0034	0.011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00098	0.0054	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00045	0.011	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00045	0.011	"	"	"	"	"	
Acenaphthylene	"	0.00083	0.00017	0.0022	"	"	"	"	"	J
2,6-Dinitrotoluene	"	ND	0.00044	0.011	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-15 (GTP7-10.0-082809)		Soil						Sampled: 08/28/09 13:27		
3-Nitroaniline	K270C STD Dry	ND	0.00063	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 23:30	
4-Chlorophenyl phenyl ether	"	ND	0.00062	0.011	"	"	"	"	"	
Acenaphthene	"	ND	0.00017	0.0022	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0015	0.11	"	"	"	"	"	
Fluorene	"	ND	0.00013	0.0022	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0015	0.011	"	"	"	"	"	
4-Nitrophenol	"	ND	0.018	0.11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0019	0.11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND <i>UT</i>	0.00024	0.0054	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00036	0.011	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00041	0.0054	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0013	0.011	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00003	0.022	"	"	"	"	"	
Phenanthrene	"	0.00087	0.00023	0.0022	"	"	"	"	"	J
Anthracene	"	0.0016	0.00015	0.0022	"	"	"	"	"	J
Benzo[a]anthracene	"	0.0021	0.00018	0.0027	"	"	"	"	"	J
Chrysene	"	0.0038	0.00015	0.0027	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0085	0.0028	0.022	<i>u</i>	"	"	"	"	J, B
Bis(2-ethylhexyl) phthalate	"	ND	0.0045	0.16	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00014	0.022	"	"	"	"	"	
Benzo[a]pyrene	"	0.0035	0.00023	0.0032	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	0.0025	0.00045	0.0043	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	0.00079	0.00024	0.0043	"	"	"	"	"	J
Benzo[g,h,i]perylene	"	0.0033	0.00016	0.0027	"	"	"	"	"	
Carbazole	"	0.0010	<i>UT</i> 0.00047	0.016	"	"	"	"	"	J, *
1-Methylnaphthalene	"	0.00056	0.00019	0.0032	"	"	"	"	"	J
Benzo[b]fluoranthene	"	0.0050	0.00044	0.0022	"	"	"	"	"	
Benzo[k]fluoranthene	"	0.0018	0.00014	0.0027	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.00073	0.016	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	74%		36 - 145 %	"	"	"	"	"	
	Phenol-d5	73%		38 - 149 %	"	"	"	"	"	
	Nitrobenzene-d5	82%		38 - 141 %	"	"	"	"	"	
	2-Fluorobiphenyl	78%		42 - 140 %	"	"	"	"	"	
	2,4,6-Tribromophenol	102%		28 - 143 %	"	"	"	"	"	
	Terphenyl-d14	91%		42 - 151 %	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-16 (GTP7-18-082809)		Soil					Sampled: 08/28/09 13:58			
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0011	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 23:51	
Phenol	"	ND	0.00082	0.011	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00082	0.011	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00062	0.022	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00080	0.0055	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0011	0.011	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00035	0.0055	"	"	"	"	"	
Hexachloroethane	"	ND	0.0012	0.011	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0011	0.011	"	"	"	"	"	
Dibenzofuran	"	ND	0.00117	0.011	"	"	"	"	"	
Nitrobenzene	"	ND	0.0032	0.011	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00071	0.0055	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00028	0.011	"	"	"	"	"	
Isophorone	"	ND	0.00045	0.011	"	"	"	"	"	
2-Methylphenol	"	ND	0.00079	0.011	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00048	0.011	"	"	"	"	"	
Diethyl phthalate	"	0.0025	0.0017	0.011	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00023	0.011	"	"	"	"	"	
Benzoic acid	"	ND	0.072	0.28	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00079	0.011	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00133	0.011	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00033	0.011	"	"	"	"	"	
2-Methylnaphthalene	"	0.00046	0.00026	0.0022	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0013	0.0055	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00029	0.011	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00044	0.017	"	"	"	"	"	
Fluoranthene	"	ND	0.00013	0.0022	"	"	"	"	"	
Naphthalene	"	0.00039	0.00024	0.0022	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00048	0.011	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0012	0.011	"	"	"	"	"	
Pyrene	"	0.00039	0.00016	0.0022	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00020	0.0022	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0034	0.011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0010	0.0055	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00047	0.011	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00047	0.011	"	"	"	"	"	
Acenaphthylene	"	ND	0.00018	0.0022	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00045	0.011	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name:	Avery Landing	
18300 NE Union Hill Rd. Suite 200	Project Number:	073-93312-03	Report Created:
Redmond, WA 98077	Project Manager:	Doug Morell	10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dij	Batch	Prepared	Analyzed	Notes
SSH0168-16 (GTP7-18-082809)			Soil				Sampled: 08/28/09 13:58			
3-Nitroaniline	8270C STD Dry	ND	0.00064	0.011	mg/Kg dry	1x	50040	09/10/09 17:24	09/14/09 23:51	
4-Chlorophenyl phenyl ether	"	ND	0.00063	0.011	"	"	"	"	"	
Acenaphthene	"	ND	0.00018	0.0022	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0016	0.11	"	"	"	"	"	
Fluorene	"	ND	0.00013	0.0022	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0016	0.011	"	"	"	"	"	
4-Nitrophenol	"	ND	0.019	0.11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0020	0.11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00024	0.0055	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00037	0.011	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00042	0.0055	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0013	0.011	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00008	0.022	"	"	"	"	"	
Phenanthrene	"	ND	0.00023	0.0022	"	"	"	"	"	
Anthracene	"	ND	0.00016	0.0022	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.00019	0.0028	"	"	"	"	"	
Chrysene	"	ND	0.00016	0.0028	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0080	0.0029	0.022	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.0047	0.17	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00014	0.022	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.00023	0.0033	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.00047	0.0044	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.00024	0.0044	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.00017	0.0028	"	"	"	"	"	
Carbazole	"	ND	0.00048	0.017	"	"	"	"	"	
1-Methylnaphthalene	"	0.00031	0.00020	0.0033	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.00043	0.0022	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.00014	0.0028	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.00074	0.017	"	"	"	"	"	
Surrogate(s):	3-Fluorophenol	75%		36 - 145 %	"					
	Phenol-d5	78%		38 - 140 %	"					
	Nitrobenzene-d5	81%		38 - 141 %	"					
	2-Fluorobiphenyl	76%		42 - 140 %	"					
	2,4,6-Trihydroxyphenol	98%		28 - 143 %	"					
	Terphenyl-d14	86%		42 - 151 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-17 (GTP2-2.5-082709)		Soil						Sampled: 08/27/09 11:40		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.12	1.2	mg/Kg dry	10x	50040	09/10/09 17:24	09/15/09 00:11	
Phenol	"	ND	0.090	1.2	"	"	"	"	"	
2-Chlorophenol	"	ND	0.090	1.2	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.068	2.4	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.087	0.61	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.12	1.2	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.039	0.61	"	"	"	"	"	
Hexachloroethane	"	ND	0.13	1.2	"	"	"	"	"	
Benzyl alcohol	"	ND	0.12	1.2	"	"	"	"	"	
Dibenzofuran	"	ND	0.018	1.2	"	"	"	"	"	
Nitrobenzene	"	ND	0.33	1.2	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.078	0.61	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.030	1.2	"	"	"	"	"	
Isophorone	"	ND	0.050	1.2	"	"	"	"	"	
3-Methylphenol	"	ND	0.086	1.2	"	"	"	"	"	
3-Nitrophenol	"	ND	0.052	1.2	"	"	"	"	"	
Diethyl phthalate	"	ND	0.18	1.2	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.023	1.2	"	"	"	"	"	
Benzoic acid	"	ND	7.9	30	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.086	1.2	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.036	1.2	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.036	1.2	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.038	0.24	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.15	0.61	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.032	1.2	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.049	1.8	"	"	"	"	"	
Fluoranthene	"	0.089	0.013	0.24	"	"	"	"	"	J
Naphthalene	"	ND	0.027	0.24	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.052	1.2	"	"	"	"	"	
4-Chloroaniline	"	ND	0.13	1.2	"	"	"	"	"	
Pyrene	"	0.081	0.017	0.24	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.022	0.24	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.38	1.2	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.11	0.61	"	"	"	"	"	
2-Nitroaniline	"	ND	0.051	1.2	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.051	1.2	"	"	"	"	"	
Acenaphthylene	"	ND	0.019	0.24	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.050	1.2	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-17 (CTP2-2.5-082709)		Soil								
3-Nitroaniline	#270C STD Dry	ND	0.070	1.2	mg/Kg dry	10x	50040	09/10/09 17:24	09/15/09 00:11	
4-Chlorophenyl phenyl ether	"	ND	0.069	1.2	"	"	"	"	"	
Acenaphthene	"	ND	0.019	0.24	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.17	12	"	"	"	"	"	
Fluorene	"	ND	0.013	0.24	"	"	"	"	"	
4-Nitroaniline	"	ND	0.17	1.2	"	"	"	"	"	
4-Nitrophenol	"	ND	3.1	12	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.22	12	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND UT	0.027	0.61	"	"	"	"	"	*
4-Bromophenyl phenyl ether	"	ND	0.040	1.2	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.046	0.61	"	"	"	"	"	
Pentachlorophenol	"	ND	0.13	1.2	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.096	2.4	"	"	"	"	"	
Phenanthrene	"	ND	0.025	0.24	"	"	"	"	"	
Anthracene	"	ND	0.017	0.24	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.021	0.30	"	"	"	"	"	
Chrysene	"	ND	0.017	0.30	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.32	2.4	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.51	18	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.016	2.4	"	"	"	"	"	
Benzo[a]pyrene	"	0.072	0.025	0.36	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.051	0.49	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.027	0.49	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.018	0.30	"	"	"	"	"	
Carbazole	"	ND UT	0.052	1.8	"	"	"	"	"	*
1-Methylnaphthalene	"	ND	0.022	0.36	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.050	0.24	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.016	0.30	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.081	1.8	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	0%		36 - 145 %	"					X
	Phenol-d5	0%		38 - 149 %	"					X
	Nitrobenzene-d5	0%		38 - 141 %	"					X
	2-Fluorobiphenyl	0%		42 - 140 %	"					X
	2,4,6-Tribromophenol	0%		28 - 143 %	"					X
	Terphenyl-d14	0%		42 - 151 %	"					X

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18 (GTP2-8-082709)		Soil								
										Sampled: 08/27/09 11:58
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0011	0.012	mg/Kg dry	1x	50042	09/10/09 17:52	09/15/09 16:45	
Phenol	"	ND	0.00086	0.012	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00086	0.012	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00063	0.023	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00083	0.0058	"	"	"	"	"	
N-Nitrosodl-n-propylamine	"	ND	0.0011	0.012	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00037	0.0058	"	"	"	"	"	
Hexachloroethane	"	ND	0.0013	0.012	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0011	0.012	"	"	"	"	"	
Dibenzofuran	"	ND	0.00017	0.012	"	"	"	"	"	
Nitrobenzene	"	ND	0.0034	0.012	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00074	0.0058	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00029	0.012	"	"	"	"	"	
Isophorone	"	ND	0.00047	0.012	"	"	"	"	"	
2-Methylphenol	"	ND	0.00082	0.012	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00050	0.012	"	"	"	"	"	
Diethyl phthalate	"	Stet 0.0019	0.0017	0.012	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.00024	0.012	"	"	"	"	"	
Benzoic acid	"	ND	0.075	0.29	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00082	0.012	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00035	0.012	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00035	0.012	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.00027	0.0023	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0014	0.0058	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00030	0.012	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00046	0.017	"	"	"	"	"	
Fluoranthene	"	0.0078	0.00014	0.0023	"	"	"	"	"	
Naphthalene	"	ND	0.00025	0.0023	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00050	0.012	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0013	0.012	"	"	"	"	"	
Pyrene	"	0.0087	0.00016	0.0023	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.00021	0.0023	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0036	0.012	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0011	0.0058	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00049	0.012	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00049	0.012	"	"	"	"	"	
Acenaphthylene	"	0.00072	0.00019	0.0023	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00047	0.012	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18 (GTP2-8-082709)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.00057	0.012	mg/Kg dry	1x	50042	09/10/09 17:52	09/15/09 16:45	
4-Chlorophenyl phenyl ether	"	ND	0.00056	0.012	"	"	"	"	"	
Acenaphthene	"	ND	0.00019	0.0023	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0016	0.12	"	"	"	"	"	
Fluorene	"	ND	0.00014	0.0023	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0016	0.012	"	"	"	"	"	
4-Nitrophenol	"	ND	0.020	0.12	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.0021	0.12	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00025	0.0058	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00038	0.012	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00044	0.0058	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0014	0.012	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.00091	0.023	"	"	"	"	"	
Phenanthrene	"	0.0029	0.00024	0.0023	"	"	"	"	"	
Anthracene	"	0.00084	0.00016	0.0023	"	"	"	"	"	
Benzo[a]anthracene	"	0.0057	0.00020	0.0029	"	"	"	"	"	
Chrysene	"	0.0068	0.00016	0.0029	"	"	"	"	"	
Di-n-butyl phthalate	"	0.0071	0.0030	0.023	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.0049	0.17	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00015	0.023	"	"	"	"	"	
Benzo[a]pyrene	"	0.0047	0.00024	0.0035	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	0.0024	0.00049	0.0046	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.00025	0.0046	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.0020	0.00017	0.0029	"	"	"	"	"	
Carbazole	"	ND	0.00050	0.017	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.00021	0.0035	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.0057	0.00047	0.0023	"	"	"	"	"	
Benzo[k]fluoranthene	"	0.0018	0.00015	0.0029	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.00077	0.017	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	91%			36 - 145 %	"				
	Phenol-d5	78%			38 - 149 %	"				
	Nitrobenzene-d5	77%			38 - 141 %	"				
	2-Fluorobiphenyl	80%			42 - 140 %	"				
	2,4,6-Tribromophenol	98%			28 - 143 %	"				
	Triphenyl-d14	96%			42 - 151 %	"				

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-19 (GTP2-13-082709)		Soil								
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.0013	0.013	mg/Kg dry	1x	50042	09/10/09 17:52	09/15/09 17:06	
Phenol	"	ND	0.00094	0.013	"	"	"	"	"	
2-Chlorophenol	"	ND	0.00094	0.013	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.00071	0.025	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.00091	0.0063	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.0012	0.013	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.00040	0.0063	"	"	"	"	"	
Hexachloroethane	"	ND	0.0014	0.013	"	"	"	"	"	
Benzyl alcohol	"	ND	0.0012	0.013	"	"	"	"	"	
Dibenzofuran	"	ND	0.00019	0.013	"	"	"	"	"	
Nitrobenzene	"	ND	0.0037	0.013	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.00081	0.0063	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.00032	0.013	"	"	"	"	"	
Isopharone	"	ND	0.00052	0.013	"	"	"	"	"	
2-Methylphenol	"	ND	0.00090	0.013	"	"	"	"	"	
2-Nitrophenol	"	ND	0.00054	0.013	"	"	"	"	"	
Diethyl phthalate	"	0.0020	0.0019	0.013	"	"	"	"	"	J
2,4-Dimethylphenol	"	ND	0.00027	0.013	"	"	"	"	"	
Benzoic acid	"	ND	0.082	0.32	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.00090	0.013	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.00038	0.013	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.00038	0.013	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.00029	0.0025	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0015	0.0063	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.00033	0.013	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.00051	0.019	"	"	"	"	"	
Fluoranthene	"	0.0010	0.0015	0.0025	"	"	"	"	"	J
Naphthalene	"	ND	0.00028	0.0025	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.00054	0.013	"	"	"	"	"	
4-Chloroaniline	"	ND	0.0014	0.013	"	"	"	"	"	
Pyrene	"	0.0012	0.00118	0.0025	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.00023	0.0025	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.0039	0.013	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0012	0.0063	"	"	"	"	"	
2-Nitroaniline	"	ND	0.00053	0.013	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.00053	0.013	"	"	"	"	"	
Acenaphthylene	"	ND	0.00020	0.0025	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.00032	0.013	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-19 (GTP2-13-082709)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.00073	0.013	mg/Kg dry	1x	50042	09/10/09 17:52	09/15/09 17:06	
4-Chlorophenyl phenyl ether	"	ND	0.00072	0.013	"	"	"	"	"	
Acenaphthene	"	ND	0.00020	0.0025	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.0018	0.13	"	"	"	"	"	
Fluorene	"	ND	0.00015	0.0025	"	"	"	"	"	
4-Nitroaniline	"	ND	0.0018	0.013	"	"	"	"	"	
4-Nitrophenol	"	ND	0.022	0.13	"	"	"	"	"	
4,6-Dinitro-3-methylphenol	"	ND	0.0023	0.13	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.00028	0.0063	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.00042	0.013	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.00048	0.0063	"	"	"	"	"	
Pentachlorophenol	"	ND	0.0015	0.013	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0010	0.025	"	"	"	"	"	
Phenanthrene	"	ND	0.00027	0.0025	"	"	"	"	"	
Anthracene	"	ND	0.00018	0.0025	"	"	"	"	"	
Benzo[a]anthracene	"	0.0010	0.00022	0.0032	"	"	"	"	"	J
Chrysene	"	0.0017	0.00018	0.0032	"	"	"	"	"	J
Di-n-butyl phthalate	"	0.0067	0.0033	0.025	"	"	"	"	"	J
Bis(2-ethylhexyl) phthalate	"	ND	0.0053	0.19	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.00016	0.025	"	"	"	"	"	
Benzo[a]pyrene	"	0.00086	0.00027	0.0038	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.00053	0.0051	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.00028	0.0051	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.00019	0.0032	"	"	"	"	"	
Carbazole	"	ND	0.00054	0.019	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.00023	0.0038	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.00052	0.0025	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.00016	0.0032	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.00085	0.019	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	66%		36 - 145 %	"					
	Phenol-d5	58%		38 - 149 %	"					
	Nitrobenzene-d5	59%		38 - 141 %	"					
	2-Fluorobiphenyl	59%		42 - 140 %	"					
	2,4,6-Tribromophenol	70%		28 - 143 %	"					
	Terphenyl-d14	62%		42 - 151 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20 (GTP1-2.5-082709)		Soil							Sampled: 08/27/09 09:20	
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.11	1.1	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 17:27	
Phenol	"	ND	0.083	1.1	"	"	"	"	"	
2-Chlorophenol	"	ND	0.083	1.1	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.063	2.3	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.081	0.56	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.11	1.1	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.036	0.56	"	"	"	"	"	
Hexachloroethane	"	ND	0.12	1.1	"	"	"	"	"	
Benzyl alcohol	"	ND	0.11	1.1	"	"	"	"	"	
Dibenzofuran	"	ND	0.017	1.1	"	"	"	"	"	
Nitrobenzene	"	ND	0.33	1.1	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.072	0.56	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.028	1.1	"	"	"	"	"	
Isophorone	"	ND	0.046	1.1	"	"	"	"	"	
2-Methylphenol	"	ND	0.080	1.1	"	"	"	"	"	
2-Nitrophenol	"	ND	0.048	1.1	"	"	"	"	"	
Diethyl phthalate	"	0.20	0.17	1.1	"	"	"	"	"	J
2,4-Dimethylphenol	"	ND	0.024	1.1	"	"	"	"	"	
Benzoic acid	"	ND	7.3	28	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.080	1.1	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.034	1.1	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.034	1.1	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.026	0.23	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.14	0.56	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.029	1.1	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.045	1.7	"	"	"	"	"	
Fluoranthene	"	ND	0.014	0.23	"	"	"	"	"	
Naphthalene	"	ND	0.025	0.23	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.048	1.1	"	"	"	"	"	
4-Chloroaniline	"	ND	0.12	1.1	"	"	"	"	"	
Pyrene	"	0.089	0.016	0.23	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.020	0.23	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.35	1.1	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.10	0.56	"	"	"	"	"	
2-Nitroaniline	"	ND	0.047	1.1	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.047	1.1	"	"	"	"	"	
Acenaphthylene	"	ND	0.018	0.23	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.046	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20 (GTPI-2.5-082709)		Soil						Sampled: 08/27/09 09:20		
3-Nitroaniline	8270C STD Dry	ND	0.065	1.1	mg/kg dry	10x	50042	09/10/09 17:52	09/15/09 17:27	
4-Chlorophenyl phenyl ether	"	ND	0.064	1.1	"	"	"	"	"	
Acenaphthene	"	ND	0.018	0.23	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.16	11	"	"	"	"	"	
Fluorene	"	ND	0.014	0.23	"	"	"	"	"	
4-Nitroaniline	"	ND	0.16	1.1	"	"	"	"	"	
4-Nitrophenol	"	ND	1.9	11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.20	11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.023	0.56	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.037	1.1	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.043	0.56	"	"	"	"	"	
Pentachlorophenol	"	ND	0.14	1.1	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.089	2.3	"	"	"	"	"	
Phenanthrene	"	ND	0.024	0.23	"	"	"	"	"	
Anthracene	"	ND	0.016	0.23	"	"	"	"	"	
Benzo[a]anthracene	"	0.10	0.019	0.28	"	"	"	"	"	J
Chrysene	"	0.11	0.016	0.28	"	"	"	"	"	J
Di-n-butyl phthalate	"	ND	0.29	2.3	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.47	17	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.015	2.3	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.024	0.34	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	0.060	0.047	0.45	"	"	"	"	"	J
Dibenzo[a,h]anthracene	"	ND	0.025	0.45	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.18	0.017	0.28	"	"	"	"	"	J
Carbazole	"	ND	0.048	1.7	"	"	"	"	"	
1-Methylnaphthalene	"	0.023	0.020	0.34	"	"	"	"	"	J
Benzo[b]fluoranthene	"	ND	0.046	0.23	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.015	0.28	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.076	1.7	"	"	"	"	"	
Surrogate(s):										
2-Fluorophenol		0%		36 - 145 %	"			"		D. X
Phenol-d5		0%		38 - 149 %	"			"		D. X
Nitrobenzene-d5		0%		38 - 141 %	"			"		D. X
2-Fluorobiphenyl		0%		42 - 140 %	"			"		D. X
2,4,6-Tribromophenol		0%		28 - 143 %	"			"		D. X
Terphenyl-d14		0%		42 - 151 %	"			"		D. X

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-21 (GTP5-11-082809)		Soil							Sampled: 08/28/09 09:37	
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.022	0.22	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 18:30	
Phenol	"	ND	0.016	0.22	"	"	"	"	"	
2-Chlorophenol	"	ND	0.016	0.22	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.012	0.44	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.016	0.11	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.021	0.22	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0070	0.11	"	"	"	"	"	
Hexachloroethane	"	ND	0.024	0.22	"	"	"	"	"	
Benzyl alcohol	"	ND	0.021	0.22	"	"	"	"	"	
Dibenzofuran	"	ND	0.0033	0.22	"	"	"	"	"	
Nitrobenzene	"	ND	0.064	0.22	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.014	0.11	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.0055	0.22	"	"	"	"	"	
Isophorone	"	ND	0.0090	0.22	"	"	"	"	"	
2-Methylphenol	"	ND	0.016	0.22	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0094	0.22	"	"	"	"	"	
Diethyl phthalate	"	ND	0.033	0.22	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.0046	0.22	"	"	"	"	"	
Benzoic acid	"	ND	1.4	5.5	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.016	0.22	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.0066	0.22	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.0066	0.22	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.0050	0.044	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.026	0.11	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.0057	0.22	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0088	0.33	"	"	"	"	"	
Fluoranthene	"	ND	0.0026	0.044	"	"	"	"	"	
Naphthalene	"	ND	0.0048	0.044	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.0094	0.22	"	"	"	"	"	
4-Chloroaniline	"	ND	0.024	0.22	"	"	"	"	"	
Pyrene	"	0.012	0.0031	0.044	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.0039	0.044	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.068	0.22	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.020	0.11	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0092	0.22	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0092	0.22	"	"	"	"	"	
Acenaphthylene	"	ND	0.0035	0.044	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0090	0.22	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-21 (GTP5-11-082809)		Soil						Sampled: 08/28/09 09:37		
3-Nitroaniline	8270C STD Dry	ND	0.013	0.22	mg/kg dry	10x	50042	09/10/09 17:52	09/15/09 18:30	
4-Chlorophenyl phenyl ether	"	ND	0.013	0.22	"	"	"	"	"	
Acenaphthene	"	ND	0.0035	0.044	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.031	2.2	"	"	"	"	"	
Fluorene	"	ND	0.0026	0.044	"	"	"	"	"	
4-Nitroaniline	"	ND	0.031	0.22	"	"	"	"	"	
4-Nitrophenol	"	ND	0.37	2.2	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.039	2.2	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.0048	0.11	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.0072	0.22	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0083	0.11	"	"	"	"	"	
Pentachlorophenol	"	ND	0.026	0.22	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.017	0.44	"	"	"	"	"	
Phenanthrene	"	ND	0.0046	0.044	"	"	"	"	"	
Anthracene	"	ND	0.0031	0.044	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.0037	0.055	"	"	"	"	"	
Chrysene	"	ND	0.0031	0.055	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.037	0.44	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.092	3.3	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.0029	0.44	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0046	0.066	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0092	0.088	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0048	0.088	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0033	0.055	"	"	"	"	"	
Carbazole	"	ND	0.0094	0.33	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.0039	0.066	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0090	0.044	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.0029	0.055	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.015	0.33	"	"	"	"	"	
Surrogate(s):										
2-Fluorophenol		0%			36 - 145 %	"				D, X
Phenol-d5		0%			38 - 149 %	"				D, X
Nitrobenzene-d5		0%			38 - 141 %	"				D, X
2-Fluorobiphenyl		0%			42 - 140 %	"				D, X
2,4,6-Tribromophenol		0%			28 - 143 %	"				D, X
Terphenyl-d14		0%			42 - 151 %	"				D, X

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22 (TS-COMP-1)		Soil						Sampled: 08/27/09 18:10		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.023	0.24	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 18:50	
Phenol	"	ND	0.018	0.24	"	"	"	"	"	
2-Chlorophenol	"	ND	0.018	0.24	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.013	0.47	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.017	0.12	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.023	0.24	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0076	0.12	"	"	"	"	"	
Hexachloroethane	"	ND	0.026	0.24	"	"	"	"	"	
Benzyl alcohol	"	ND	0.023	0.24	"	"	"	"	"	
Dibenzofuran	"	ND	0.0035	0.24	"	"	"	"	"	
Nitrobenzene	"	ND	0.069	0.24	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.015	0.12	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.0059	0.24	"	"	"	"	"	
Isophorone	"	ND	0.0097	0.24	"	"	"	"	"	
2-Methylphenol	"	ND	0.017	0.24	"	"	"	"	"	
3-Nitrophenol	"	ND	0.010	0.24	"	"	"	"	"	
Diethyl phthalate	"	ND	0.035	0.24	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.0050	0.24	"	"	"	"	"	
Benzoic acid	"	ND	1.5	5.9	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.017	0.24	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.0071	0.24	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.0071	0.24	"	"	"	"	"	
2-Methylnaphthalene	"	4.6	0.0054	0.047	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.028	0.12	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.0062	0.24	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0095	0.35	"	"	"	"	"	
Fluoranthene	"	0.072	0.0028	0.047	"	"	"	"	"	
Naphthalene	"	0.19	0.0052	0.047	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.010	0.24	"	"	"	"	"	
4-Chloroaniline	"	ND	0.026	0.24	"	"	"	"	"	
Pyrene	"	0.13	0.0033	0.047	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.0043	0.047	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.073	0.24	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.022	0.12	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0099	0.24	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0099	0.24	"	"	"	"	"	
Acenaphthylene	"	ND	0.0038	0.047	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0097	0.24	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22 (TS-COMP-1)		Soil								
3-Nitroaniline	8270C STD Dry	ND	0.014	0.24	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 18:50	
4-Chlorophenyl phenyl ether	"	ND	0.013	0.24	"	"	"	"	"	
Acenaphthene	"	0.81	0.0038	0.047	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.033	2.4	"	"	"	"	"	
Fluorene	"	1.2	0.0028	0.047	"	"	"	"	"	
4-Nitroaniline	"	ND	0.033	0.24	"	"	"	"	"	
4-Nitrophenol	"	ND	0.40	2.4	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.043	2.4	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.0052	0.12	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.0078	0.24	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0090	0.12	"	"	"	"	"	
Pentachlorophenol	"	ND	0.028	0.24	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.019	0.47	"	"	"	"	"	
Phenanthrene	"	1.6	0.0050	0.047	"	"	"	"	"	
Anthracene	"	0.11	0.0033	0.047	"	"	"	"	"	
Benzo[a]anthracene	"	0.049	0.0040	0.059	"	"	"	"	"	J
Chrysene	"	0.088	0.0033	0.059	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.062	0.47	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.099	3.5	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.0031	0.47	"	"	"	"	"	
Benzo[a]pyrene	"	0.021	0.0050	0.071	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.0099	0.095	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0052	0.095	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0035	0.059	"	"	"	"	"	
Carbazole	"	ND	0.010	0.35	"	"	"	"	"	
1-Methylnaphthalene	"	5.5	0.0043	0.071	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0097	0.047	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.0031	0.059	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.016	0.35	"	"	"	"	"	
Surrogate(s): 2-Fluorophenol		0%		36 - 145 %	"					D. X
Phenol-d15		0%		38 - 149 %	"					D. X
Nitrobenzene-d5		0%		38 - 141 %	"					D. X
2-Fluorobiphenyl		0%		42 - 140 %	"					D. X
2,4,6-Tribromophenol		0%		28 - 143 %	"					D. X
Terphenyl-d14		0%		42 - 151 %	"					D. X

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-23 (TS-COMP-2)		Soil						Sampled: 08/27/09 18:28		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.022	0.22	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 19:11	
Phenol	"	ND	0.016	0.22	"	"	"	"	"	
2-Chlorophenol	"	ND	0.016	0.22	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.012	0.44	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.016	0.11	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.021	0.22	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0070	0.11	"	"	"	"	"	
Hexachloroethane	"	ND	0.024	0.22	"	"	"	"	"	
Benzyl alcohol	"	ND	0.021	0.22	"	"	"	"	"	
Dibenzofuran	"	ND	0.0033	0.22	"	"	"	"	"	
Nitrobenzene	"	ND	0.063	0.22	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.014	0.11	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.0055	0.22	"	"	"	"	"	
Isophorane	"	ND	0.0090	0.22	"	"	"	"	"	
2-Methylphenol	"	ND	0.016	0.22	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0094	0.22	"	"	"	"	"	
Diethyl phthalate	"	ND	0.033	0.22	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.0046	0.22	"	"	"	"	"	
Benzoic acid	"	ND	1.4	5.5	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.016	0.22	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.0066	0.22	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.0066	0.22	"	"	"	"	"	
2-Methylnaphthalene	"	9.5	0.0050	0.044	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.026	0.11	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.0057	0.22	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0087	0.33	"	"	"	"	"	
Fluoranthene	"	0.54	0.0026	0.044	"	"	"	"	"	
Naphthalene	"	0.83	0.0048	0.044	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.0094	0.22	"	"	"	"	"	
4-Chloroaniline	"	ND	0.024	0.22	"	"	"	"	"	
Pyrene	"	0.57	0.0031	0.044	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.0039	0.044	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.068	0.22	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.020	0.11	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0092	0.22	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0092	0.22	"	"	"	"	"	
Acenaphthylene	"	ND	0.0035	0.044	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0090	0.22	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-23 (TS-COMP-2)		Soil								
3-Nitroaniline	#270C STD Dry	ND	0.013	0.22	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 19:11	
4-Chlorophenyl phenyl ether	"	ND	0.012	0.22	"	"	"	"	"	
Acenaphthene	"	1.5	0.0035	0.044	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.031	2.2	"	"	"	"	"	
Fluorene	"	2.6	0.0026	0.044	"	"	"	"	"	
4-Nitroaniline	"	ND	0.031	0.22	"	"	"	"	"	
4-Nitrophenol	"	ND	0.37	2.2	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.039	2.2	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.0048	0.11	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.0072	0.22	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0083	0.11	"	"	"	"	"	
Pentachlorophenol	"	ND	0.026	0.22	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.017	0.44	"	"	"	"	"	
Phenanthrene	"	4.7	0.0046	0.044	"	"	"	"	"	
Anthracene	"	0.28	0.0031	0.044	"	"	"	"	"	
Benzo[a]anthracene	"	0.10	0.0037	0.055	"	"	"	"	"	
Chrysene	"	0.26	0.0031	0.055	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.037	0.44	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.092	3.3	"	"	"	"	"	
Di-n-octyl phthalate	"	0.054	0.0028	0.44	"	"	"	"	"	J
Benzo[a]pyrene	"	0.077	0.0046	0.066	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0093	0.087	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0048	0.087	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.036	0.0033	0.055	"	"	"	"	"	J
Carbazole	"	ND	0.0094	0.33	"	"	"	"	"	
1-Methylnaphthalene	"	10	0.020	0.33	"	50x	"	"	09/16/09 14:08	
Benzo[b]fluoranthene	"	ND	0.0090	0.044	"	10x	"	"	09/15/09 19:11	
Benzo[k]fluoranthene	"	ND	0.0028	0.055	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.015	0.33	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	0%		36 - 145 %	"	"	"	"	"	D. X
	Phenol-d5	0%		38 - 149 %	"	"	"	"	"	D. X
	Nitrobenzene-d5	0%		38 - 141 %	"	"	"	"	"	D. X
	2-Fluorobiphenyl	0%		42 - 140 %	"	"	"	"	"	D. X
	2,4,6-Tribromophenol	0%		28 - 143 %	"	"	"	"	"	D. X
	Terphenyl-d14	0%		42 - 151 %	"	"	"	"	"	D. X

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24 (TS-COMP-3)		Soil						Sampled: 08/27/09 16:40		
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.11	1.1	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 19:32	
Phenol	"	ND	0.081	1.1	"	"	"	"	"	
2-Chlorophenol	"	ND	0.081	1.1	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.061	2.2	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.079	0.55	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.11	1.1	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.035	0.55	"	"	"	"	"	
Hexachloroethane	"	ND	0.12	1.1	"	"	"	"	"	
Benzyl alcohol	"	ND	0.11	1.1	"	"	"	"	"	
Dibenzofuran	"	ND	0.016	1.1	"	"	"	"	"	
Nitrobenzene	"	ND	0.32	1.1	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.070	0.55	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.027	1.1	"	"	"	"	"	
Isophorone	"	ND	0.045	1.1	"	"	"	"	"	
2-Methylphenol	"	ND	0.078	1.1	"	"	"	"	"	
2-Nitrophenol	"	ND	0.047	1.1	"	"	"	"	"	
Diethyl phthalate	"	ND	0.16	1.1	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	0.023	1.1	"	"	"	"	"	
Benzoic acid	"	ND	7.1	27	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.078	1.1	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.033	1.1	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.053	1.1	"	"	"	"	"	
2-Methylnaphthalene	"	0.38	0.025	0.22	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.13	0.55	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.029	1.1	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.044	1.6	"	"	"	"	"	
Fluoranthene	"	ND	0.013	0.22	"	"	"	"	"	
Naphthalene	"	ND	0.024	0.22	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.047	1.1	"	"	"	"	"	
4-Chloroaniline	"	ND	0.12	1.1	"	"	"	"	"	
Pyrene	"	0.19	0.015	0.22	"	"	"	"	"	
2-Chloronaphthalene	"	ND	0.020	0.22	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.34	1.1	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.10	0.55	"	"	"	"	"	
2-Nitroaniline	"	ND	0.046	1.1	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.046	1.1	"	"	"	"	"	
Acenaphthylene	"	ND	0.018	0.22	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.045	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24 (TS-COMP-3)		Soil					Sampled: 08/27/09 16:40			
3-Nitroaniline	8270C STD Dry	ND	0.064	1.1	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 19:32	
4-Chlorophenyl phenyl ether	"	ND	0.063	1.1	"	"	"	"	"	
Acenaphthene	"	0.20	0.018	0.22	"	"	"	"	"	J
2,4-Dinitrophenol	"	ND	0.15	11	"	"	"	"	"	
Fluorene	"	0.52	0.013	0.22	"	"	"	"	"	
4-Nitroaniline	"	ND	0.15	1.1	"	"	"	"	"	
4-Nitrophenol	"	ND	1.9	11	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.20	11	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.034	0.55	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.036	1.1	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.042	0.55	"	"	"	"	"	
Pentachlorophenol	"	ND	0.13	1.1	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.087	2.2	"	"	"	"	"	
Phenanthrene	"	0.47	0.023	0.22	"	"	"	"	"	
Anthracene	"	0.068	0.015	0.22	"	"	"	"	"	J
Benzo[a]anthracene	"	ND	0.019	0.27	"	"	"	"	"	
Chrysene	"	ND	0.015	0.27	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	0.29	2.2	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.46	16	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.014	2.2	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.023	0.33	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.046	0.44	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.024	0.44	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.016	0.27	"	"	"	"	"	
Carbazole	"	ND	0.047	1.6	"	"	"	"	"	
1-Methylphtalene	"	0.78	0.020	0.33	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.045	0.22	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.014	0.27	"	"	"	"	"	
2,2'-oxybis[1-chloropropane]	"	ND	0.073	1.6	"	"	"	"	"	
Surrogate(s):										
2-Fluorophenol		0%			36 - 145 %	"			"	D. X
Phenol-d5		0%			38 - 149 %	"			"	D. X
Nitrobenzene-d5		0%			38 - 141 %	"			"	D. X
2-Fluorobiphenyl		0%			42 - 140 %	"			"	D. X
2,4,6-Tribromophenol		0%			28 - 143 %	"			"	D. X
Terphenyl-d14		0%			42 - 151 %	"			"	D. X

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-25 (GTP4-6.0-082709)		Soil							Sampled: 08/27/09 15:49	
3-Nitroaniline	8270C STD Dry	ND	0.0064	0.11	mg/Kg dry	10x	S0042	09/10/09 17:52	09/15/09 19:53	
4-Chlorophenyl phenyl ether	"	ND	0.0063	0.11	"	"	"	"	"	
Acenaphthene	"	ND	0.0018	0.023	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	0.015	1.1	"	"	"	"	"	
Fluorene	"	ND	0.0013	0.022	"	"	"	"	"	
4-Nitroaniline	"	ND	0.015	0.11	"	"	"	"	"	
4-Nitrophenol	"	ND	0.19	1.1	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	0.020	1.1	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	0.0024	0.055	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	0.0036	0.11	"	"	"	"	"	
Hexachlorobenzene	"	ND	0.0042	0.055	"	"	"	"	"	
Pentachlorophenol	"	ND	0.013	0.11	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	0.0087	0.22	"	"	"	"	"	
Phenanthrene	"	0.0077	0.0023	0.022	"	"	"	"	"	J
Anthracene	"	0.0052	0.0015	0.022	"	"	"	"	"	J
Benzo[a]anthracene	"	0.010	0.0019	0.027	"	"	"	"	"	J
Chrysene	"	0.014	0.0015	0.027	"	"	"	"	"	J
Di-n-butyl phthalate	"	ND	0.029	0.22	"	"	"	"	"	
Bis(2-ethylhexyl) phthalate	"	ND	0.046	1.6	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	0.0014	0.22	"	"	"	"	"	
Benzo[a]pyrene	"	0.010	0.0023	0.033	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	0.0047	0.0046	0.044	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	ND	0.0024	0.044	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.0060	0.0016	0.027	"	"	"	"	"	J
Carbazole	"	ND	0.0047	0.16	"	"	"	"	"	
1-Methylnaphthalene	"	ND	0.0020	0.033	"	"	"	"	"	
Benzo[b]fluoranthene	"	0.0076	0.0045	0.022	"	"	"	"	"	J
Benzo[k]fluoranthene	"	0.0058	0.0014	0.027	"	"	"	"	"	J
2,2'-oxybis[1-chloropropane]	"	ND	0.0074	0.16	"	"	"	"	"	
Surrogate(s):	2-Fluorophenol	0%			36 - 145 %	"				D. X
	Phenol-d5	0%			38 - 149 %	"				D. X
	Nitrobenzene-d5	0%			38 - 141 %	"				D. X
	2-Fluorobiphenyl	0%			42 - 140 %	"				D. X
	2,4,6-Tribromophenol	0%			28 - 143 %	"				D. X
	Terphenyl-d14	0%			42 - 151 %	"				D. X

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Semivolatile Compounds by Gas Chromatography/Mass TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-25 (GTP4-6.0-082709)		Soil								
Bis(2-chloroethyl)ether	8270C STD Dry	ND	0.011	0.11	mg/Kg dry	10x	50042	09/10/09 17:52	09/15/09 19:53	
Phenol	"	ND	0.0081	0.11	"	"	"	"	"	
2-Chlorophenol	"	ND	0.0081	0.11	"	"	"	"	"	
3 & 4 Methylphenol	"	ND	0.0061	0.22	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0079	0.055	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	0.011	0.11	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0035	0.055	"	"	"	"	"	
Hexachloroethane	"	ND	0.012	0.11	"	"	"	"	"	
Benzyl alcohol	"	ND	0.011	0.11	"	"	"	"	"	
Dibenzofuran	"	ND	0.0016	0.11	"	"	"	"	"	
Nitrobenzene	"	ND	0.032	0.11	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.0070	0.055	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	0.0027	0.11	"	"	"	"	"	
Isophorone	"	ND	0.0045	0.11	"	"	"	"	"	
2-Methylphenol	"	ND	0.0078	0.11	"	"	"	"	"	
2-Nitrophenol	"	ND	0.0047	0.11	"	"	"	"	"	
Diethyl phthalate	"	0.019	0.016	0.11	"	"	"	"	"	J
2,4-Dimethylphenol	"	ND	0.0033	0.11	"	"	"	"	"	
Benzoic acid	"	ND	0.71	2.7	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	0.0078	0.11	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	0.0033	0.11	"	"	"	"	"	
2,4-Dichlorophenol	"	ND	0.0033	0.11	"	"	"	"	"	
2-Methylnaphthalene	"	ND	0.0025	0.022	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.013	0.055	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	0.0029	0.11	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	0.0044	0.16	"	"	"	"	"	
Fluoranthene	"	0.017	0.0013	0.022	"	"	"	"	"	J
Naphthalene	"	ND	0.0024	0.022	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	0.0047	0.11	"	"	"	"	"	
4-Chloroaniline	"	ND	0.012	0.11	"	"	"	"	"	
Pyrene	"	0.015	0.0015	0.022	"	"	"	"	"	J
2-Chloronaphthalene	"	ND	0.0020	0.022	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	0.034	0.11	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.010	0.055	"	"	"	"	"	
2-Nitroaniline	"	ND	0.0046	0.11	"	"	"	"	"	
Dimethyl phthalate	"	ND	0.0046	0.11	"	"	"	"	"	
Acenaphthylene	"	ND	0.0018	0.022	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	0.0045	0.11	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01 (GTP1-10.5-082709)		Soil								
Bromomethane	8260B STD Dry	ND	0.00048	0.0012	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 14:26	
Chloroethane	"	ND	0.00033	0.0012	"	"	"	"	"	
Chloromethane	"	ND	0.00022	0.0012	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00022	0.0012	"	"	"	"	"	
Chloroform	"	ND	0.00018	0.0012	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00016	0.0012	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00020	0.0012	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00046	0.0012	"	"	"	"	"	
Trichloroethene	"	ND	0.00022	0.0012	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00021	0.0012	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000092	0.0012	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00015	0.0012	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00011	0.0025	"	"	"	"	"	
Bromoform	"	ND	0.000089	0.0012	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00045	0.0012	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00023	0.0025	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00042	0.0012	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		111%			85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)		176%			75 - 125 %	"				X.1
4-Bromofluorobenzene (Surr)		81%			85 - 120 %	"				X.1

SSH0168-01RE1 (GTP1-10.5-082709)		Soil								
1,1-Dichloropropene	8260B STD Dry	ND	0.0069	0.15	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 17:18	
1,2-Dichlorobenzene	"	ND	0.010	0.15	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.050	0.15	"	"	"	"	"	
Bromomethane	"	ND	0.096	0.54	"	"	"	"	"	
Chloroethane	"	ND	0.089	1.5	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.031	0.15	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.012	0.15	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0081	0.15	"	"	"	"	"	
Chloromethane	"	ND	0.23	1.5	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.019	0.15	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.019	0.077	"	"	"	"	"	
sec-Butylbenzene	"	0.41	0.019	0.15	"	"	"	"	"	
Vinyl chloride	"	ND	0.0066	0.031	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.019	0.15	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.014	0.15	"	"	"	"	"	
Methylene Chloride	"	0.057	0.015	0.15	u	"	"	"	"	J.B.

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01RE1 (GTP1-10.5-082709)		Soil		Sampled: 08/27/09 09:40						
4-Isopropyltoluene	\$2603 STD Dry	0.13	0.011	0.15	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 17:18	J
cis-1,2-Dichloroethene	"	ND	0.0093	0.15	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.014	0.15	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.013	0.15	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.019	0.15	"	"	"	"	"	
Chlorobromomethane	"	ND	0.046	0.15	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.013	0.062	"	"	"	"	"	
Benzene	"	ND	0.0096	0.062	"	"	"	"	"	
Chloroform	"	ND	0.0081	0.15	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.012	0.15	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.019	0.15	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0085	0.15	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.014	0.077	"	"	"	"	"	
Trichloroethene	"	ND	0.013	0.062	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.015	0.046	"	"	"	"	"	
Dibromomethane	"	ND	0.015	0.15	"	"	"	"	"	
Toluene	"	0.057	0.0093	0.15	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.012	0.15	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0069	0.046	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0093	0.062	"	"	"	"	"	
Chlorobenzene	"	ND	0.0089	0.15	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0081	0.077	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.019	0.15	"	"	"	"	"	
Ethylbenzene	"	0.081	0.014	0.15	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.019	0.15	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.031	0.15	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.013	0.039	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.12	0.030	0.15	"	"	"	"	"	J
o-Xylene	"	0.052	0.0089	0.15	"	"	"	"	"	J
Styrene	"	ND	0.015	0.15	"	"	"	"	"	
Bromoform	"	ND	0.042	0.15	"	"	"	"	"	
Isopropylbenzene	"	0.10	0.0069	0.15	"	"	"	"	"	J
Bromobenzene	"	ND	0.010	0.15	"	"	"	"	"	
N-Propylbenzene	"	0.094	0.011	0.15	"	"	"	"	"	J
1,2,3-Trichloropropane	"	ND	0.035	0.15	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.021	0.15	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.016	0.15	"	"	"	"	"	
n-Butylbenzene	"	ND	0.028	0.15	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.25	0.77	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-01RE1 (GTP1-10.5-082709)		Soil		Sampled: 08/27/09 09:40						
1,2,4-Trichlorobenzene	"	ND	0.019	0.15	"	"	"	"	"	"
1,2,3-Trichlorobenzene	"	ND	0.019	0.15	"	"	"	"	"	"
Hexachlorobutadiene	"	ND	0.022	0.15	"	"	"	"	"	"
Naphthalene	"	ND	0.023	0.15	"	"	"	"	"	"
Surrogate(s): Toluene-d8 (Surr)		98%			85 - 115 %	"			"	
Ethylbenzene-d10		110%			75 - 125 %	"			"	
4-Bromofluorobenzene (Surr)		100%			85 - 120 %	"			"	
Fluorobenzene (Surr)		106%			75 - 125 %	"			"	

SSH0168-02 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
Bromomethane	8260B STD Dry	ND	0.00037	0.00095	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 14:50	
Chloroethane	"	ND	0.00026	0.00095	"	"	"	"	"	
Chloromethane	"	ND	0.00017	0.00095	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00017	0.00095	"	"	"	"	"	
Chloroform	"	ND	0.00014	0.00095	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00013	0.00095	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00015	0.00095	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00035	0.00095	"	"	"	"	"	
Trichloroethene	"	ND	0.00017	0.00095	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00016	0.00095	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000070	0.00095	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00011	0.00095	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000084	0.0019	"	"	"	"	"	
Bromoform	"	ND	0.000069	0.00095	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00034	0.00095	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00017	0.0019	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00032	0.00095	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		120%			85 - 115 %	"			"	X. I
1,2-Dichloroethane-d4 (Surr)		119%			75 - 125 %	"			"	
4-Bromofluorobenzene (Surr)		119%			85 - 120 %	"			"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-02RE1 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
1,1-Dichloropropene	8260B STD Dry	ND	0.0036	0.080	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 17:42	
1,2-Dichlorobenzene	"	ND	0.0032	0.080	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.026	0.080	"	"	"	"	"	
Bromomethane	"	ND	0.050	0.28	"	"	"	"	"	
Chloroethane	"	ND	0.046	0.80	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.016	0.080	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0064	0.080	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0042	0.080	"	"	"	"	"	
Chloromethane	"	ND	0.12	0.80	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.010	0.080	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.010	0.040	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.010	0.080	"	"	"	"	"	
Vinyl chloride	"	ND	0.0034	0.016	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.010	0.080	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0074	0.080	"	"	"	"	"	
Methylene Chloride	"	0.032	0.0076	0.080	u	"	"	"	"	J-B
4-Isopropyltoluene	"	ND	0.0056	0.080	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0048	0.080	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0070	0.080	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0076	0.080	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.010	0.080	"	"	"	"	"	
Chlorobromomethane	"	ND	0.024	0.080	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0080	0.032	"	"	"	"	"	
Benzene	"	ND	0.0050	0.032	"	"	"	"	"	
Chloroform	"	ND	0.0042	0.080	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0064	0.080	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.010	0.080	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0044	0.080	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0074	0.040	"	"	"	"	"	
Trichloroethene	"	ND	0.0068	0.032	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0078	0.024	"	"	"	"	"	
Dibromomethane	"	ND	0.0080	0.080	"	"	"	"	"	
Toluene	"	ND	0.0048	0.080	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0060	0.080	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0036	0.024	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0048	0.032	"	"	"	"	"	
Chlorobenzene	"	ND	0.0046	0.080	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0042	0.040	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-02RE1 (GTP1-13.5-082709)		Soil		Sampled: 08/27/09 10:10						
1,3-Dichloropropane	8260B STD Dry	ND	0.010	0.080	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 17:42	
Ethylbenzene	"	ND	0.0074	0.080	"	"	"	"	"	
1,1,1,3-Tetrachloroethane	"	ND	0.0096	0.080	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.016	0.080	"	"	"	"	"	
1,1,2,3-Tetrachloroethane	"	ND	0.0066	0.020	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.016	0.016	0.080	"	"	"	"	"	J
o-Xylene	"	ND	0.0046	0.080	"	"	"	"	"	
Styrene	"	ND	0.0076	0.080	"	"	"	"	"	
Bromoforn	"	ND	0.022	0.080	"	"	"	"	"	
Isopropylbenzene	"	0.014	0.0036	0.080	"	"	"	"	"	J
Bromobenzene	"	ND	0.0054	0.080	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0056	0.080	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.023	0.080	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.011	0.080	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0084	0.080	"	"	"	"	"	
n-Butylbenzene	"	ND	0.015	0.080	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.13	0.40	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.010	0.080	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.010	0.080	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.011	0.080	"	"	"	"	"	
Naphthalene	"	ND	0.012	0.080	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		98%		85 - 115 %		"			"	
Ethylbenzene-d10		109%		75 - 125 %		"			"	
4-Bromofluorobenzene (Surr)		105%		85 - 120 %		"			"	
Fluorobenzene (Surr)		104%		75 - 125 %		"			"	

SSH0168-03 (GTP3-3.5-082709)

Soil

Sampled: 08/27/09 14:15

Bromomethane	8260B STD Dry	ND	0.00062	0.0016	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 13:14	
Chloroethane	"	ND	0.00043	0.0016	"	"	"	"	"	
Chloromethane	"	ND	0.00028	0.0016	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00029	0.0016	"	"	"	"	"	
Chloroform	"	ND	0.00024	0.0016	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00021	0.0016	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00026	0.0016	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00060	0.0016	"	"	"	"	"	
Trichloroethene	"	ND	0.00028	0.0016	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00028	0.0016	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00012	0.0016	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-03 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
cis-1,3-Dichloropropene	8260B STD Dry	ND	0.00019	0.0016	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 15:14	
1,1,2,2-Tetrachloroethane	"	ND	0.00014	0.0032	"	"	"	"	"	
Bromobrom	"	ND	0.00012	0.0016	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00038	0.0016	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00029	0.0032	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00054	0.0016	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)			103%		85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)			101%		75 - 125 %	"				
4-Bromofluorobenzene (Surr)			117%		85 - 120 %	"				
SSH0168-03RE1 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
1,1-Dichloropropene	8260B STD Dry	ND	0.0047	0.10	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 18:06	
1,2-Dichlorobenzene	"	ND	0.0068	0.10	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.034	0.10	"	"	"	"	"	
Bromomethane	"	ND	0.066	0.37	"	"	"	"	"	
Chloroethane	"	ND	0.060	1.0	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.021	0.10	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0084	0.10	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.017	0.0055	0.10	"	"	"	"	"	J
Chloromethane	"	ND	0.16	1.0	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.013	0.10	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.013	0.052	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.013	0.10	"	"	"	"	"	
Vinyl chloride	"	ND	0.0045	0.021	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.013	0.10	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0097	0.10	"	"	"	"	"	
Methylene Chloride	"	0.51	0.010	0.10	"	"	"	"	"	J
4-Isopropyltoluene	"	0.028	0.0073	0.10	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0063	0.10	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0092	0.10	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.010	0.10	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.013	0.10	"	"	"	"	"	
Chlorobromomethane	"	ND	0.031	0.10	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.010	0.042	"	"	"	"	"	
Benzene	"	0.0097	0.0066	0.042	"	"	"	"	"	J
Chloroform	"	ND	0.0055	0.10	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0084	0.10	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.013	0.10	"	"	"	"	"	

TestAmerica Spokane

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Rander Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-03RE1 (GTP3-3.5-082709)		Soil		Sampled: 08/27/09 14:15						
1,2-Dichloroethane	82603 STD Dry	ND	0.0058	0.10	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 18:06	
Carbon tetrachloride	"	ND	0.0097	0.052	"	"	"	"	"	
Trichloroethene	"	ND	0.0089	0.042	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.010	0.031	"	"	"	"	"	
Dibromomethane	"	ND	0.010	0.10	"	"	"	"	"	
Toluene	"	0.20	0.0063	0.10	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0079	0.10	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0047	0.031	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0063	0.042	"	"	"	"	"	
Chlorobenzene	"	ND	0.0060	0.10	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0055	0.052	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.013	0.10	"	"	"	"	"	
Ethylbenzene	"	0.012	0.0097	0.10	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.013	0.10	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.021	0.10	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0087	0.026	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.061	0.020	0.10	"	"	"	"	"	J
o-Xylene	"	ND	0.0060	0.10	"	"	"	"	"	
Styrene	"	ND	0.010	0.10	"	"	"	"	"	
Bromoforn	"	ND	0.029	0.10	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0047	0.10	"	"	"	"	"	
Bromobenzene	"	ND	0.0071	0.10	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0073	0.10	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.030	0.10	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.014	0.10	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.011	0.10	"	"	"	"	"	
n-Butylbenzene	"	ND	0.019	0.10	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.17	0.52	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.013	0.10	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.013	0.10	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.015	0.10	"	"	"	"	"	
Napthalene	"	0.067	0.016	0.10	"	"	"	"	"	J
Surrogate(s): Toluene-d8 (Surr)		101%		85 - 115 %	"					
Ethylbenzene-d10		106%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		107%		85 - 120 %	"					
Fluorobenzene (Surr)		106%		75 - 125 %	"					

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
Bromomethane	8260B STD Dry	ND	0.00073	0.0019	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 15:38	
Chloroethane	"	ND	0.00052	0.0019	"	"	"	"	"	
Chloromethane	"	ND	0.00034	0.0019	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00035	0.0019	"	"	"	"	"	
Chloroform	"	ND	0.00029	0.0019	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00026	0.0019	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00031	0.0019	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00072	0.0019	"	"	"	"	"	
Trichloroethene	"	ND	0.00034	0.0019	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00033	0.0019	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00014	0.0019	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00023	0.0019	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00017	0.0039	"	"	"	"	"	
Bromoform	"	ND	0.00014	0.0019	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00070	0.0019	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00035	0.0039	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00065	0.0019	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>		115%			85 - 115 %	"				
<i>1,2-Dichloroethane-d4 (Surr)</i>		99%			75 - 125 %	"				
<i>4-Bromofluorobenzene (Surr)</i>		118%			85 - 120 %	"				

SSH0168-04RE1 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
1,1-Dichloropropene	8260B STD Dry	ND	0.0039	0.088	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 18:29	
1,2-Dichlorobenzene	"	ND	0.0057	0.088	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.028	0.088	"	"	"	"	"	
Bromomethane	"	ND	0.035	0.31	"	"	"	"	"	
Chloroethane	"	ND	0.050	0.88	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.018	0.088	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0070	0.088	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.021	0.0046	0.088	"	"	"	"	"	
Chloromethane	"	ND	0.13	0.88	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.011	0.088	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.011	0.044	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.011	0.088	"	"	"	"	"	
Vinyl chloride	"	ND	0.0037	0.018	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.011	0.088	"	"	"	"	"	
2,3-Dichloropropane	"	ND	0.0081	0.088	"	"	"	"	"	
Methylene Chloride	"	0.032	0.0081	0.088	CL	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/01/09 10:07
Redmond, WA 98077	Project Manager: Doug Morell	

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04RE1 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
4-Isopropyltoluene	8260B STD Dry	18	0.061	0.88	mg/Kg dry	10x	49928	09/09/09 15:36	09/10/09 23:36	
cis-1,2-Dichloroethene	"	ND	0.0053	0.088	"	1x	"	"	09/09/09 18:29	
trans-1,2-Dichloroethene	"	ND	0.0077	0.088	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0083	0.088	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.011	0.088	"	"	"	"	"	
Chlorobromomethane	"	ND	0.026	0.088	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0088	0.035	"	"	"	"	"	
Benzene	"	ND	0.0053	0.035	"	"	"	"	"	
Chloroform	"	ND	0.0046	0.088	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0070	0.088	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.011	0.088	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0048	0.088	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0081	0.044	"	"	"	"	"	
Trichloroethene	"	ND	0.0074	0.035	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0085	0.026	"	"	"	"	"	
Dibromomethane	"	ND	0.0088	0.088	"	"	"	"	"	
Toluene	"	0.081	0.0053	0.088	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.0066	0.088	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0059	0.026	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0053	0.035	"	"	"	"	"	
Chlorobenzene	"	ND	0.0050	0.088	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0046	0.044	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.011	0.088	"	"	"	"	"	
Ethylbenzene	"	0.072	0.0081	0.088	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.011	0.088	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.018	0.088	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0072	0.022	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.025	0.017	0.088	"	"	"	"	"	J
o-Xylene	"	0.010	0.0050	0.088	"	"	"	"	"	J
Styrene	"	ND	0.0083	0.088	"	"	"	"	"	
Bromoform	"	ND	0.024	0.088	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0039	0.088	"	"	"	"	"	
Bromobenzene	"	ND	0.0059	0.088	"	"	"	"	"	
N-Propylbenzene	"	0.056	0.0061	0.088	"	"	"	"	"	J
1,2,3-Trichloropropane	"	ND	0.025	0.088	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.012	0.088	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0092	0.088	"	"	"	"	"	
n-Butylbenzene	"	ND	0.016	0.088	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-04RE1 (GTP3-5-082709)		Soil		Sampled: 08/27/09 14:35						
1,3-Dibromo-3-Chloropropane	8260B STD Dry	ND	0.14	0.44	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 18:29	
1,2,4-Trichlorobenzene	"	ND	0.011	0.088	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.011	0.088	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.012	0.088	"	"	"	"	"	
Naphthalene	"	0.050	0.013	0.088	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		98%			85 - 115 %	"				
Ethylbenzene-d10		114%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		100%			85 - 120 %	"				
Fluorobenzene (Surr)		101%			75 - 125 %	"				
SSH0168-05 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
Bromomethane	8260B STD Dry	ND	0.00038	0.00099	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 16:02	
Chloroethane	"	ND	0.00026	0.00099	"	"	"	"	"	
Chloromethane	"	ND	0.00017	0.00099	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00018	0.00099	"	"	"	"	"	
Chloroform	"	ND	0.00015	0.00099	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00013	0.00099	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00016	0.00099	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00037	0.00099	"	"	"	"	"	
Trichloroethene	"	ND	0.00017	0.00099	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00017	0.00099	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00073	0.00099	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00012	0.00099	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00087	0.0020	"	"	"	"	"	
Bromoform	"	ND	0.00071	0.00099	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00036	0.00099	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00018	0.0020	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00033	0.00099	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		98%			85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)		100%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		108%			85 - 120 %	"				



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-05RE1 (CTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
1,1-Dichloropropene	8260B STD Dry	ND	0.0032	0.070	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 18:53	
1,2-Dichlorobenzene	"	ND	0.0046	0.070	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.023	0.070	"	"	"	"	"	
Bromomethane	"	ND	0.044	0.25	"	"	"	"	"	
Chloroethane	"	ND	0.040	0.70	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.014	0.070	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0056	0.070	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0037	0.070	"	"	"	"	"	
Chloromethane	"	ND	0.11	0.70	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0088	0.070	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0088	0.035	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0088	0.070	"	"	"	"	"	
Vinyl chloride	"	ND	0.0030	0.014	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0088	0.070	"	"	"	"	"	
2,3-Dichloropropane	"	ND	0.0065	0.070	"	"	"	"	"	
Methylene Chloride	"	0.13	0.0067	0.070	"	"	"	"	"	
4-Isopropyltoluene	"	0.10	0.0049	0.070	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0042	0.070	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0062	0.070	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0067	0.070	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0088	0.070	"	"	"	"	"	
Chlorobromomethane	"	ND	0.021	0.070	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0070	0.028	"	"	"	"	"	
Benzene	"	ND	0.0044	0.028	"	"	"	"	"	
Chloroform	"	ND	0.0037	0.070	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0056	0.070	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0088	0.070	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0039	0.070	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0065	0.035	"	"	"	"	"	
Trichloroethene	"	ND	0.0060	0.028	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0069	0.021	"	"	"	"	"	
Dibromomethane	"	ND	0.0070	0.070	"	"	"	"	"	
Toluene	"	0.010	0.0042	0.070	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0053	0.070	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0032	0.021	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0042	0.028	"	"	"	"	"	
Chlorobenzene	"	ND	0.0040	0.070	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0037	0.035	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-05RE1 (GTP3-13.5-082709)		Soil		Sampled: 08/27/09 14:49						
1,3-Dichloropropane	8260B STD Dry	ND	0.0008	0.070	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 18:53	
Ethylbenzene	"	ND	0.0065	0.070	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0004	0.070	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.014	0.070	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0058	0.018	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.014	0.014	0.070	"	"	"	"	"	J
o-Xylene	"	0.0067	0.0040	0.070	"	"	"	"	"	J
Styrene	"	ND	0.0067	0.070	"	"	"	"	"	
Bromoform	"	ND	0.019	0.070	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0032	0.070	"	"	"	"	"	
Bromobenzene	"	ND	0.0047	0.070	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0049	0.070	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.020	0.070	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0093	0.070	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0074	0.070	"	"	"	"	"	
n-Butylbenzene	"	ND	0.013	0.070	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.12	0.35	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0008	0.070	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0008	0.070	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0098	0.070	"	"	"	"	"	
Naphthalene	"	ND	0.011	0.070	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		100%			85 - 115 %	"			"	
Ethylbenzene-d10		113%			75 - 125 %	"			"	
4-Bromofluorobenzene (Surr)		106%			85 - 120 %	"			"	
Fluorobenzene (Surr)		107%			75 - 125 %	"			"	

SSH0168-06 (GTP4-2.5-082709)

Soil

Sampled: 08/27/09 15:40

Bromomethane	8260B STD Dry	ND	0.00046	0.0012	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 16:26	
Chloroethane	"	ND	0.00032	0.0012	"	"	"	"	"	
Chloromethane	"	ND	0.00021	0.0012	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00021	0.0012	"	"	"	"	"	
Chloroform	"	ND	0.00018	0.0012	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00016	0.0012	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00019	0.0012	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00044	0.0012	"	"	"	"	"	
Trichloroethene	"	ND	0.00021	0.0012	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00020	0.0012	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000008	0.0012	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-06 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
cis-1,3-Dichloropropene	8260B STD Dry	ND	0.00014	0.0012	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 16:26	
1,1,2,2-Tetrachloroethane	"	ND	0.00010	0.0024	"	"	"	"	"	
Bromofom	"	ND	0.000085	0.0012	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00013	0.0012	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00022	0.0024	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00040	0.0012	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		99%		85 - 115 %		"		"		
1,2-Dichloroethane-d4 (Surr)		101%		75 - 125 %		"		"		
4-Bromofluorobenzene (Surr)		108%		85 - 120 %		"		"		
SSH0168-06RE1 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
1,1-Dichloropropene	8260B STD Dry	ND	0.0020	0.044	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 19:18	
1,2-Dichlorobenzene	"	ND	0.0029	0.044	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.014	0.044	"	"	"	"	"	
Bromomethane	"	ND	0.028	0.16	"	"	"	"	"	
Chloroethane	"	ND	0.026	0.44	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0089	0.044	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0036	0.044	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.41	0.0023	0.044	"	"	"	"	"	
Chloromethane	"	ND	0.067	0.44	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0035	0.044	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0035	0.022	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0035	0.044	"	"	"	"	"	
Vinyl chloride	"	ND	0.0019	0.0089	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0035	0.044	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0041	0.044	"	"	"	"	"	
Methylene Chloride	"	0.016	0.0042	0.044	"	"	"	"	"	
4-Isopropyltoluene	"	0.022	0.0031	0.044	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0027	0.044	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0039	0.044	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0042	0.044	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0035	0.044	"	"	"	"	"	
Chlorobromomethane	"	ND	0.013	0.044	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0044	0.018	"	"	"	"	"	
Benzene	"	0.026	0.0028	0.018	"	"	"	"	"	
Chloroform	"	ND	0.0023	0.044	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0036	0.044	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0035	0.044	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-06RE1 (GTP4-2.5-082709)		Soil		Sampled: 08/27/09 15:40						
1,2-Dichloroethane	826013 STD Dry	ND	0.0024	0.044	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 19:18	
Carbon tetrachloride	"	ND	0.0041	0.022	"	"	"	"	"	
Trichloroethene	"	ND	0.0038	0.018	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0043	0.013	"	"	"	"	"	
Dibromomethane	"	ND	0.0044	0.044	"	"	"	"	"	
Toluene	"	0.21	0.0027	0.044	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0033	0.044	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0020	0.013	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0027	0.018	"	"	"	"	"	
Chlorobenzene	"	ND	0.0026	0.044	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0023	0.022	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0055	0.044	"	"	"	"	"	
Ethylbenzene	"	0.039	0.0041	0.044	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.0053	0.044	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0089	0.044	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0037	0.011	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.59	0.0087	0.044	"	"	"	"	"	
o-Xylene	"	0.41	0.0026	0.044	"	"	"	"	"	
Styrene	"	ND	0.0042	0.044	"	"	"	"	"	
Bromoform	"	ND	0.012	0.044	"	"	"	"	"	
Isopropylbenzene	"	0.0066	0.0020	0.044	"	"	"	"	"	J
Bromobenzene	"	ND	0.0030	0.044	"	"	"	"	"	
N-Propylbenzene	"	0.019	0.0031	0.044	"	"	"	"	"	J
1,2,3-Trichloropropane	"	ND	0.013	0.044	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0060	0.044	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	0.27	0.0047	0.044	"	"	"	"	"	
n-Butylbenzene	"	ND	0.0081	0.044	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.073	0.22	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0055	0.044	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0055	0.044	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0062	0.044	"	"	"	"	"	
Naphthalene	"	0.14	0.0067	0.044	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		99%		85 - 115 %	"					
Ethylbenzene-d10		114%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		100%		85 - 120 %	"					
Fluorobenzene (Surr)		103%		75 - 125 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07 (GTP4-8.0-082709)	Soil	Sampled: 08/27/09 15:59								
Bromomethane	8260B STD Dry	ND	0.00016	0.0012	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 16:49	
Chloroethane	"	ND	0.00032	0.0012	"	"	"	"	"	
Chloromethane	"	ND	0.00021	0.0012	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00021	0.0012	"	"	"	"	"	
Chloroform	"	ND	0.00018	0.0012	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00016	0.0012	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00019	0.0012	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00045	0.0012	"	"	"	"	"	
Trichloroethene	"	ND	0.00021	0.0012	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00020	0.0012	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000089	0.0012	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00014	0.0012	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00011	0.0024	"	"	"	"	"	
Bromoform	"	ND	0.00006	0.0012	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00043	0.0012	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00022	0.0024	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00040	0.0012	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		102%		85 - 115 %	"					
1,2-Dichloroethane-d4 (Surr)		102%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		106%		85 - 120 %	"					

SSH0168-07RE1 (GTP4-8.0-082709)	Soil	Sampled: 08/27/09 15:59								
1,1-Dichloropropene	8260B STD Dry	ND	0.0022	0.048	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 19:42	
1,2-Dichlorobenzene	"	ND	0.0031	0.048	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.016	0.048	"	"	"	"	"	
Bromomethane	"	ND	0.030	0.17	"	"	"	"	"	
Chloroethane	"	ND	0.028	0.48	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0096	0.048	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0039	0.048	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0025	0.048	"	"	"	"	"	
Chloromethane	"	ND	0.072	0.48	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0060	0.048	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0060	0.024	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0060	0.048	"	"	"	"	"	
Vinyl chloride	"	ND	0.0020	0.0096	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0060	0.048	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0045	0.048	"	"	"	"	"	
Methylene Chloride	"	0.019	0.0046	0.048	u	"	"	"	"	J.D.

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07RE1 (GTP4-8,0-082709)		Soil		Sampled: 08/27/09 15:59						
4-Isopropyltoluene	8260B STD Dry	0.014	0.0034	0.048	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 19:42	J
cis-1,2-Dichloroethene	"	ND	0.0029	0.048	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0042	0.048	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0046	0.048	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0060	0.048	"	"	"	"	"	
Chlorobromomethane	"	ND	0.014	0.048	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0048	0.019	"	"	"	"	"	
Benzene	"	ND	0.0030	0.019	"	"	"	"	"	
Chloroform	"	ND	0.0025	0.048	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0039	0.048	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0060	0.048	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0026	0.048	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0045	0.024	"	"	"	"	"	
Trichloroethene	"	ND	0.0041	0.019	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0047	0.014	"	"	"	"	"	
Dibromomethane	"	ND	0.0048	0.048	"	"	"	"	"	
Toluene	"	ND	0.0029	0.048	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0036	0.048	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0022	0.014	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0029	0.019	"	"	"	"	"	
Chlorobenzene	"	ND	0.0028	0.048	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0025	0.024	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0060	0.048	"	"	"	"	"	
Ethylbenzene	"	ND	0.0045	0.048	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0058	0.048	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0096	0.048	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0040	0.012	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.012	0.0094	0.048	"	"	"	"	"	J
o-Xylene	"	ND	0.0028	0.048	"	"	"	"	"	
Styrene	"	ND	0.0046	0.048	"	"	"	"	"	
Bromoform	"	ND	0.013	0.048	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0022	0.048	"	"	"	"	"	
Bromobenzene	"	ND	0.0033	0.048	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0034	0.048	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.014	0.048	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0065	0.048	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0031	0.048	"	"	"	"	"	
n-Butylbenzene	"	ND	0.0088	0.048	"	"	"	"	"	

TestAmerica Spokane

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[Signature]
Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/01/09 10:07
Redmond, WA 98077	Project Manager: Doug Morell	

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-07RE1 (GTP4-8.0-082709)		Soil		Sampled: 08/27/09 15:59						
1,2-Dibromo-3-Chloropropane	8260B STD Dry	ND	0.079	0.24	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 19:42	
1,2,4-Trichlorobenzene	"	ND	0.0060	0.048	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0060	0.048	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0067	0.048	"	"	"	"	"	
Naphthalene	"	ND	0.0072	0.048	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		98%			85 - 115 %	"				
Ethylbenzene-d10		105%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		102%			85 - 120 %	"				
Fluorobenzene (Surr)		106%			75 - 125 %	"				
SSH0168-09 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
Bromomethane	8260B STD Dry	ND	0.00043	0.0011	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 17:13	
Chloroethane	"	ND	0.00030	0.0011	"	"	"	"	"	
Chloromethane	"	ND	0.00020	0.0011	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00020	0.0011	"	"	"	"	"	
Chloroform	"	ND	0.00017	0.0011	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00015	0.0011	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00018	0.0011	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00042	0.0011	"	"	"	"	"	
Trichloroethene	"	ND	0.00020	0.0011	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00019	0.0011	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000083	0.0011	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00013	0.0011	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000199	0.0023	"	"	"	"	"	
Bromoform	"	ND	0.000081	0.0011	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00041	0.0011	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00020	0.0023	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00038	0.0011	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		99%			85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)		103%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		105%			85 - 120 %	"				

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-09RE1 (GTP5-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
1,1-Dichloropropene	8260B STD Dry	ND	0.0027	0.060	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 20:06	
1,2-Dichlorobenzene	"	ND	0.0039	0.060	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.019	0.060	"	"	"	"	"	
Bromomethane	"	ND	0.037	0.21	"	"	"	"	"	
Chloroethane	"	ND	0.034	0.60	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.013	0.060	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0048	0.060	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0031	0.060	"	"	"	"	"	
Chloromethane	"	ND	0.090	0.60	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0075	0.060	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0075	0.030	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0075	0.060	"	"	"	"	"	
Vinyl chloride	"	ND	0.0025	0.012	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0055	0.060	"	"	"	"	"	
Methylene Chloride	"	0.047	0.0037	0.060	"	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0042	0.060	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0036	0.060	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0052	0.060	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0057	0.060	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
Chlorobromomethane	"	ND	0.018	0.060	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0060	0.024	"	"	"	"	"	
Benzene	"	ND	0.0037	0.024	"	"	"	"	"	
Chloroform	"	ND	0.0031	0.060	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0048	0.060	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0075	0.060	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0033	0.060	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0055	0.030	"	"	"	"	"	
Trichloroethene	"	ND	0.0051	0.024	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0058	0.018	"	"	"	"	"	
Dibromomethane	"	ND	0.0060	0.060	"	"	"	"	"	
Toluene	"	ND	0.0036	0.060	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0045	0.060	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0027	0.018	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0036	0.024	"	"	"	"	"	
Chlorobenzene	"	ND	0.0034	0.060	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0031	0.030	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-09RE1 (GTPS-3.0-082709)		Soil		Sampled: 08/27/09 16:40						
1,3-Dichloropropane	8260B STD Dry	ND	0.0075	0.060	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 20:06	
Ethylbenzene	"	ND	0.0035	0.060	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0072	0.060	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.012	0.060	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0049	0.015	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.012	0.060	"	"	"	"	"	
o-Xylene	"	ND	0.0034	0.060	"	"	"	"	"	
Styrene	"	ND	0.0057	0.060	"	"	"	"	"	
Bromoform	"	ND	0.016	0.060	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0027	0.060	"	"	"	"	"	
Bromobenzene	"	ND	0.0040	0.060	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0042	0.060	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.017	0.060	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0081	0.060	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0063	0.060	"	"	"	"	"	
n-Butylbenzene	"	ND	0.011	0.060	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.0099	0.30	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0084	0.060	"	"	"	"	"	
Naphthalene	"	ND	0.0090	0.060	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		97%			85 - 115 %	"				
Ethylbenzene-d10		104%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		97%			85 - 120 %	"				
Fluorobenzene (Surr)		103%			75 - 125 %	"				

SSH0168-10 (GTPS-7.0-082709)

Soil

Sampled: 08/27/09 16:53

Bromomethane	8260B STD Dry	ND	0.0013	0.0035	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 17:37	
Chloroethane	"	ND	0.00093	0.0035	"	"	"	"	"	
Chloromethane	"	ND	0.00061	0.0035	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00061	0.0035	"	"	"	"	"	
Chloroform	"	ND	0.00051	0.0035	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00046	0.0035	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00055	0.0035	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0013	0.0035	"	"	"	"	"	
Trichloroethene	"	ND	0.00061	0.0035	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00059	0.0035	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00026	0.0035	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
cis-1,3-Dichloropropene	8260B STD Dry	ND	0.00040	0.0035	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 17:37	
1,1,2,2-Tetrachloroethane	"	ND	0.00030	0.0069	"	"	"	"	"	
Bromoforn	"	ND	0.00025	0.0035	"	"	"	"	"	
1,2,3-Trichloropropene	"	ND	0.0012	0.0035	"	"	"	"	"	
1,2-Dibromo-3-Chloropropene	"	ND	0.00063	0.0069	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0012	0.0035	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		116%			85 - 115 %	"				X. I
1,2-Dichloroethane-d4 (Surr)		105%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		133%			85 - 120 %	"				X. I
SSH0168-10RE1 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
1,1-Dichloropropene	8260B STD Dry	ND	0.0070	0.16	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 20:30	
1,2-Dichlorobenzene	"	ND	0.010	0.16	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.051	0.16	"	"	"	"	"	
Bromomethane	"	ND	0.097	0.54	"	"	"	"	"	
Chloroethane	"	ND	0.089	1.6	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.031	0.16	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.012	0.16	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.12	0.0002	0.16	"	"	"	"	"	J
Chloromethane	"	ND	0.23	1.6	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.019	0.16	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.019	0.078	"	"	"	"	"	
sec-Butylbenzene	"	0.036	0.019	0.16	"	"	"	"	"	J
Vinyl chloride	"	ND	0.0066	0.031	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.019	0.16	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.014	0.16	"	"	"	"	"	
Methylene Chloride	"	0.064	0.015	0.16	"	"	"	"	"	J
4-Isopropyltoluene	"	0.15	0.011	0.16	"	"	"	"	"	J
cis-1,2-Dichloroethene	"	ND	0.0093	0.16	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.014	0.16	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.015	0.16	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.019	0.16	"	"	"	"	"	
Chlorobromomethane	"	ND	0.047	0.16	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.016	0.062	"	"	"	"	"	
Benzene	"	ND	0.0097	0.062	"	"	"	"	"	
Chloroform	"	ND	0.0082	0.16	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.012	0.16	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.019	0.16	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-10RE1 (GTP5-7.0-082709)		Soil		Sampled: 08/27/09 16:53						
1,2-Dichloroethane	8260B STD Dry	ND	0.0086	0.16	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 20:30	
Carbon tetrachloride	"	ND	0.014	0.078	"	"	"	"	"	
Trichloroethene	"	ND	0.013	0.062	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.015	0.047	"	"	"	"	"	
Dibromomethane	"	ND	0.016	0.16	"	"	"	"	"	
Toluene	"	0.095	0.0093	0.16	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.012	0.16	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0070	0.047	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0093	0.062	"	"	"	"	"	
Chlorobenzene	"	ND	0.0089	0.16	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0082	0.078	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.019	0.16	"	"	"	"	"	
Ethylbenzene	"	0.088	0.014	0.16	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.019	0.16	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.031	0.16	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.013	0.039	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.030	0.16	"	"	"	"	"	
o-Xylene	"	0.012	0.0089	0.16	"	"	"	"	"	J
Styrene	"	ND	0.015	0.16	"	"	"	"	"	
Bromoform	"	ND	0.043	0.16	"	"	"	"	"	
Isopropylbenzene	"	0.030	0.0070	0.16	"	"	"	"	"	J
Bromobenzene	"	ND	0.010	0.16	"	"	"	"	"	
N-Propylbenzene	"	ND	0.011	0.16	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.045	0.16	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.021	0.16	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	0.058	0.016	0.16	"	"	"	"	"	J
n-Butylbenzene	"	ND	0.028	0.16	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.26	0.78	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.019	0.16	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.019	0.16	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.022	0.16	"	"	"	"	"	
Naphthalene	"	0.090	0.023	0.16	"	"	"	"	"	J
Surrogate(s): Toluene-d8 (Surr)		97%			85 - 115 %	"		"	"	
Ethylbenzene-d10		111%			75 - 125 %	"		"	"	
4-Bromofluorobenzene (Surr)		100%			85 - 120 %	"		"	"	
Fluorobenzene (Surr)		103%			75 - 125 %	"		"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-11 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
Bromomethane	8260B STD Dry	ND	0.0011	0.0028	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 21:36	
Chloroethane	"	ND	0.00076	0.0028	"	"	"	"	"	
Chloromethane	"	ND	0.00050	0.0028	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00051	0.0028	"	"	"	"	"	
Chloroform	"	ND	0.00042	0.0028	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00038	0.0028	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00046	0.0028	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0011	0.0028	"	"	"	"	"	
Trichloroethene	"	ND	0.00050	0.0028	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00049	0.0028	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00021	0.0028	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00033	0.0028	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00025	0.0057	"	"	"	"	"	
Bromoform	"	ND	0.00021	0.0028	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.0010	0.0028	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00052	0.0057	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00096	0.0028	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>		117%			85 - 115 %	"			"	X. /
<i>1,2-Dichloroethane-d4 (Surr)</i>		106%			75 - 125 %	"			"	
<i>4-Bromofluorobenzene (Surr)</i>		128%			85 - 120 %	"			"	X. /

SSH0168-11RE1 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
1,1-Dichloropropene	8260B STD Dry	ND	0.0064	0.14	mg/Kg dry	1x	49928	09/09/09 15:36	09/10/09 00:56	
1,2-Dichlorobenzene	"	ND	0.0093	0.14	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.047	0.14	"	"	"	"	"	
Bromomethane	"	ND	0.090	0.50	"	"	"	"	"	
Chloroethane	"	ND	0.082	1.4	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.029	0.14	"	"	"	"	"	
tert-Butylbenzene	"	0.16	0.011	0.14	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	53	0.075	1.4	"	10x	"	"	09/11/09 00:00	
Chloromethane	"	ND	0.21	1.4	"	1x	"	"	09/10/09 00:56	
Trichlorofluoromethane	"	ND	0.018	0.14	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.018	0.072	"	"	"	"	"	
sec-Butylbenzene	"	4.5	0.018	0.14	"	"	"	"	"	
Vinyl chloride	"	ND	0.0061	0.029	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.018	0.14	"	"	"	"	"	
2,2-Dichloropropene	"	ND	0.013	0.14	"	"	"	"	"	
Methylene Chloride	"	0.40	0.014	0.14	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-11RE1 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
4-Isopropyltoluene	8260B STD Dry	27	0.010	0.14	mg/Kg dry	1x	49928	09/09/09 15:36	09/10/09 00:56	
cis-1,2-Dichloroethene	"	ND	0.0086	0.14	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.013	0.14	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.014	0.14	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.018	0.14	"	"	"	"	"	
Chlorobromomethane	"	ND	0.043	0.14	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.014	0.057	"	"	"	"	"	
Benzene	"	0.045	0.0090	0.057	"	"	"	"	"	J
Chloroform	"	ND	0.0075	0.14	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.011	0.14	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.018	0.14	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0079	0.14	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.013	0.072	"	"	"	"	"	
Trichloroethene	"	ND	0.012	0.057	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.014	0.043	"	"	"	"	"	
Dibromomethane	"	ND	0.014	0.14	"	"	"	"	"	
Toluene	"	0.12	0.0086	0.14	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.011	0.14	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0064	0.043	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0086	0.057	"	"	"	"	"	
Chlorobenzene	"	ND	0.0082	0.14	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0075	0.072	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.018	0.14	"	"	"	"	"	
Ethylbenzene	"	3.2	0.013	0.14	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.017	0.14	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.029	0.14	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.012	0.036	"	"	"	"	"	
m-Xylene & p-Xylene	"	9.0	0.028	0.14	"	"	"	"	"	
o-Xylene	"	5.5	0.0082	0.14	"	"	"	"	"	
Styrene	"	ND	0.014	0.14	"	"	"	"	"	
Bromoform	"	ND	0.039	0.14	"	"	"	"	"	
Isopropylbenzene	"	1.6	0.0064	0.14	"	"	"	"	"	
Bromobenzene	"	ND	0.0097	0.14	"	"	"	"	"	
N-Propylbenzene	"	4.3	0.010	0.14	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.042	0.14	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.019	0.14	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	13	0.015	0.14	"	"	"	"	"	
n-Butylbenzene	"	ND	0.026	0.14	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.24	0.72	"	"	"	"	"	

TestAmerica Spokane

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[Signature]

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-11RE1 (GTP6-10-082809)		Soil		Sampled: 08/28/09 10:36						
1,2,4-Trichlorobenzene	"	ND	0.018	0.14	"	"	"	"	"	"
1,2,3-Trichlorobenzene	"	ND	0.018	0.14	"	"	"	"	"	"
Hexachlorobutadiene	"	ND	0.020	0.14	"	"	"	"	"	"
Naphthalene	"	38	0.21	1.4	"	10x	"	"	09/11/09 00:00	"
Surrogate(s): Toluene-d8 (Surr)		100%			85 - 115 %	1x			09/10/09 00:56	"
Ethylbenzene-d10		110%			75 - 125 %	"			"	"
4-Bromofluorobenzene (Surr)		102%			85 - 120 %	"			"	"
Fluorobenzene (Surr)		106%			75 - 125 %	"			"	"
SSH0168-12 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
Bromomethane	8260B STD Dry	ND	0.00044	0.0011	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 17:54	"
Chloroethane	"	ND	0.00030	0.0011	"	"	"	"	"	"
Chloromethane	"	ND	0.00020	0.0011	"	"	"	"	"	"
trans-1,3-Dichloropropene	"	ND	0.00020	0.0011	"	"	"	"	"	"
Chloroform	"	ND	0.00017	0.0011	"	"	"	"	"	"
Ethylene Dibromide	"	ND	0.00015	0.0011	"	"	"	"	"	"
1,2-Dichloroethane	"	ND	0.00018	0.0011	"	"	"	"	"	"
Carbon tetrachloride	"	ND	0.00042	0.0011	"	"	"	"	"	"
Trichloroethene	"	ND	0.00020	0.0011	"	"	"	"	"	"
1,2-Dichloropropane	"	ND	0.00019	0.0011	"	"	"	"	"	"
Dichlorobromomethane	"	ND	0.000044	0.0011	"	"	"	"	"	"
cis-1,3-Dichloropropene	"	ND	0.00013	0.0011	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	"	ND	0.00010	0.0023	"	"	"	"	"	"
Bromoform	"	ND	0.000082	0.0011	"	"	"	"	"	"
1,2,3-Trichloropropane	"	ND	0.00041	0.0011	"	"	"	"	"	"
1,2-Dibromo-3-Chloropropane	"	ND	0.00021	0.0023	"	"	"	"	"	"
Hexachlorobutadiene	"	ND	0.00038	0.0011	"	"	"	"	"	"
Surrogate(s): Toluene-d8 (Surr)		100%			85 - 115 %	"			"	"
1,2-Dichloroethane-d4 (Surr)		104%			75 - 125 %	"			"	"
4-Bromofluorobenzene (Surr)		109%			85 - 120 %	"			"	"

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-12RE1 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
1,1-Dichloropropene	#26013 STD Dry	ND	0.0023	0.056	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 20:55	
1,2-Dichlorobenzene	"	ND	0.0036	0.056	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.018	0.056	"	"	"	"	"	
Bromomethane	"	ND	0.035	0.19	"	"	"	"	"	
Chloroethane	"	ND	0.032	0.56	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.011	0.056	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0044	0.056	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0029	0.056	"	"	"	"	"	
Chloromethane	"	ND	0.083	0.56	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0069	0.056	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0069	0.028	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0069	0.056	"	"	"	"	"	
Vinyl chloride	"	ND	0.0024	0.011	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0069	0.056	"	"	"	"	"	
2,3-Dichloropropane	"	ND	0.0051	0.056	"	"	"	"	"	
Methylene Chloride	"	0.045	0.0053	0.056	CL	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0039	0.056	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0033	0.056	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0049	0.056	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0053	0.056	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0069	0.056	"	"	"	"	"	
Chlorobromomethane	"	ND	0.017	0.056	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0056	0.022	"	"	"	"	"	
Benzene	"	ND	0.0035	0.022	"	"	"	"	"	
Chloroform	"	ND	0.0029	0.056	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0044	0.056	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0069	0.056	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0031	0.056	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0051	0.028	"	"	"	"	"	
Trichloroethene	"	ND	0.0047	0.022	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0054	0.017	"	"	"	"	"	
Dibromomethane	"	ND	0.0056	0.056	"	"	"	"	"	
Toluene	"	ND	0.0033	0.056	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0042	0.056	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0025	0.017	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0033	0.022	"	"	"	"	"	
Chlorobenzene	"	ND	0.0032	0.056	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0029	0.028	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-12RE1 (GTP6-2.5-082809)		Soil		Sampled: 08/28/09 10:10						
1,3-Dichloropropane	8260B STD Dry	ND	0.0069	0.056	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 20:55	
Ethylbenzene	"	ND	0.0051	0.056	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0067	0.056	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.011	0.056	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0046	0.014	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.011	0.056	"	"	"	"	"	
o-Xylene	"	ND	0.0032	0.056	"	"	"	"	"	
Styrene	"	ND	0.0053	0.056	"	"	"	"	"	
Bromoform	"	ND	0.015	0.056	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0025	0.056	"	"	"	"	"	
Bromobenzene	"	ND	0.0037	0.056	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0039	0.056	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.016	0.056	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0075	0.056	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0058	0.056	"	"	"	"	"	
n-Butylbenzene	"	ND	0.010	0.056	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.092	0.28	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0069	0.056	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0069	0.056	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0078	0.056	"	"	"	"	"	
Naphthalene	"	ND	0.0083	0.056	"	"	"	"	"	
Surrogate(s):										
Toluene-d8 (Surr)		97%			85 - 115 %	"				
Ethylbenzene-d10		107%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		98%			85 - 120 %	"				
Trifluorotoluene (Surr)		94%			75 - 125 %	"				
Fluorobenzene (Surr)		104%			75 - 125 %	"				

SSH0168-13 (GTP6-17-082809)

Soil

Sampled: 08/28/09 11:11

Bromomethane	8260B STD Dry	ND	0.00058	0.0015	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 18:18	
Chloroethane	"	ND	0.00041	0.0015	"	"	"	"	"	
Chloromethane	"	ND	0.00027	0.0015	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00027	0.0015	"	"	"	"	"	
Chloroform	"	ND	0.00022	0.0015	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00020	0.0015	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00024	0.0015	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00056	0.0015	"	"	"	"	"	
Trichloroethene	"	ND	0.00027	0.0015	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00026	0.0015	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-13 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
Dichlorobromomethane	8260B STD Dry	ND	0.00011	0.0015	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 18:18	
cis-1,3-Dichloropropene	"	ND	0.00018	0.0015	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00013	0.0030	"	"	"	"	"	
Bromoform	"	ND	0.00011	0.0015	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00055	0.0015	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00028	0.0030	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00051	0.0015	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		103%		85 - 115 %	"	"	"	"	"	
1,2-Dichloroethane-d4 (Surr)		101%		75 - 125 %	"	"	"	"	"	
4-Bromofluorobenzene (Surr)		120%		85 - 120 %	"	"	"	"	"	
SSH0168-13RE1 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
1,1-Dichloropropene	8260B STD Dry	ND	0.0040	0.089	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 21:18	
1,2-Dichlorobenzene	"	ND	0.0058	0.089	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.029	0.089	"	"	"	"	"	
Bromomethane	"	ND	0.053	0.31	"	"	"	"	"	
Chloroethane	"	ND	0.051	0.89	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.018	0.089	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0071	0.089	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.42	0.0047	0.089	"	"	"	"	"	
Chloromethane	"	ND	0.13	0.89	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.011	0.089	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.011	0.044	"	"	"	"	"	
sec-Butylbenzene	"	0.051	0.011	0.089	"	"	"	"	"	
Vinyl chloride	"	ND	0.0038	0.018	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.011	0.089	"	"	"	"	"	
2,2-Dichloropropene	"	ND	0.0082	0.089	"	"	"	"	"	
Methylene Chloride	"	0.30	0.0084	0.089	"	"	"	"	"	
4-Isopropyltoluene	"	0.55	0.0062	0.089	"	"	"	"	"	
cis-1,2-Dichloroethene	"	0.095	0.0053	0.089	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0078	0.089	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0084	0.089	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.011	0.089	"	"	"	"	"	
Chlorobromomethane	"	ND	0.027	0.089	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0089	0.036	"	"	"	"	"	
Benzene	"	ND	0.0055	0.036	"	"	"	"	"	
Chloroform	"	ND	0.0047	0.089	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0071	0.089	"	"	"	"	"	

TestAmerica Spokane

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[Signature]
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-13RE1 (GTP6-17-082809)		Soil		Sampled: 08/28/09 11:11						
1,1,1-Trichloroethane	#260B STD Dry	ND	0.011	0.089	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 21:18	
1,2-Dichloroethane	"	ND	0.0049	0.089	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0082	0.044	"	"	"	"	"	
Trichloroethene	"	0.023	0.0075	0.036	"	"	"	"	"	J
1,2-Dichloropropane	"	ND	0.0087	0.027	"	"	"	"	"	
Dibromomethane	"	ND	0.0089	0.089	"	"	"	"	"	
Toluene	"	0.018	0.0053	0.089	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.0067	0.089	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0040	0.027	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0053	0.036	"	"	"	"	"	
Chlorobenzene	"	ND	0.0051	0.089	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0047	0.044	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.011	0.089	"	"	"	"	"	
Ethylbenzene	"	0.072	0.0082	0.089	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.011	0.089	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.018	0.089	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0073	0.022	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.16	0.017	0.089	"	"	"	"	"	
o-Xylene	"	0.088	0.0051	0.089	"	"	"	"	"	J
Styrene	"	ND	0.0084	0.089	"	"	"	"	"	
Bromoform	"	ND	0.024	0.089	"	"	"	"	"	
Isopropylbenzene	"	0.031	0.0040	0.089	"	"	"	"	"	J
Bromobenzene	"	ND	0.0060	0.089	"	"	"	"	"	
N-Propylbenzene	"	0.053	0.0062	0.089	"	"	"	"	"	J
1,2,3-Trichloropropene	"	ND	0.026	0.089	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.012	0.089	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	0.12	0.0093	0.089	"	"	"	"	"	
n-Butylbenzene	"	0.35	0.016	0.089	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.15	0.44	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.011	0.089	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.011	0.089	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.012	0.089	"	"	"	"	"	
Naphthalene	"	0.36	0.013	0.089	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		100%		85 - 115 %	"					
Ethylbenzene-d10		107%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		102%		85 - 120 %	"					
Fluorobenzene (Surr)		105%		75 - 125 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
Bromomethane	8260B STD Dry	ND	0.00048	0.0012	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 18:41	
Chloroethane	"	ND	0.00033	0.0012	"	"	"	"	"	
Chloromethane	"	ND	0.00022	0.0012	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00022	0.0012	"	"	"	"	"	
Chloroform	"	ND	0.00018	0.0012	"	"	"	"	"	
Etylene Dibromide	"	ND	0.00016	0.0012	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00020	0.0012	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00046	0.0012	"	"	"	"	"	
Trichloroethene	"	ND	0.00022	0.0012	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00021	0.0012	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000092	0.0012	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00014	0.0012	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00011	0.0025	"	"	"	"	"	
Bromoform	"	ND	0.000089	0.0012	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00043	0.0012	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00023	0.0025	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00042	0.0012	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		101%		85 - 115 %	"					
1,2-Dichloroethane-d4 (Surr)		100%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		104%		85 - 120 %	"					

SSH0168-14RE1 (GTP7-2.5-082809)

Soil

Sampled: 08/28/09 12:50

1,1-Dichloropropene	8260B STD Dry	ND	0.0022	0.049	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 21:42	
1,2-Dichlorobenzene	"	ND	0.0032	0.049	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.016	0.049	"	"	"	"	"	
Bromomethane	"	ND	0.031	0.17	"	"	"	"	"	
Chloroethane	"	ND	0.028	0.49	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0098	0.049	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0039	0.049	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0036	0.049	"	"	"	"	"	
Chloromethane	"	ND	0.073	0.49	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0061	0.049	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0061	0.024	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0061	0.049	"	"	"	"	"	
Vinyl chloride	"	ND	0.0021	0.0098	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0061	0.049	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0043	0.049	"	"	"	"	"	
Methylene Chloride	"	0.030	0.0047	0.049	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14RE1 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
4-Isopropyltoluene	8260B STD Dry	0.0049	0.0034	0.049	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 21:42	J
cis-1,2-Dichloroethene	"	ND	0.0029	0.049	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0043	0.049	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0047	0.049	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0061	0.049	"	"	"	"	"	
Chlorobromomethane	"	ND	0.015	0.049	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0049	0.020	"	"	"	"	"	
Benzene	"	ND	0.0031	0.020	"	"	"	"	"	
Chloroform	"	ND	0.0026	0.049	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0039	0.049	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0061	0.049	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0027	0.049	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0045	0.024	"	"	"	"	"	
Trichloroethene	"	ND	0.0042	0.020	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0048	0.015	"	"	"	"	"	
Dibromomethane	"	ND	0.0049	0.049	"	"	"	"	"	
Toluene	"	ND	0.0029	0.049	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0037	0.049	"	"	"	"	"	
1,1,3-Trichloroethane	"	ND	0.0022	0.015	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0029	0.020	"	"	"	"	"	
Chlorobenzene	"	ND	0.0028	0.049	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0026	0.024	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0061	0.049	"	"	"	"	"	
Ethylbenzene	"	ND	0.0045	0.049	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0059	0.049	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0098	0.049	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0040	0.012	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.0095	0.049	"	"	"	"	"	
o-Xylene	"	ND	0.0028	0.049	"	"	"	"	"	
Styrene	"	ND	0.0047	0.049	"	"	"	"	"	
Bromoform	"	ND	0.013	0.049	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0022	0.049	"	"	"	"	"	
Bromobenzene	"	ND	0.0033	0.049	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0034	0.049	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.014	0.049	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0066	0.049	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0051	0.049	"	"	"	"	"	
n-Butylbenzene	"	ND	0.0089	0.049	"	"	"	"	"	

TestAmerica Spokane

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Rundee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-14RE1 (GTP7-2.5-082809)		Soil		Sampled: 08/28/09 12:50						
1,2-Dibromo-3-Chloropropane	8260B STD Dry	ND	0.001	0.24	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 21:42	
1,2,4-Trichlorobenzene	"	ND	0.0061	0.049	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0061	0.049	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0069	0.049	"	"	"	"	"	
Naphthalene	"	ND	0.0073	0.049	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>		101%			85 - 115 %	"				
<i>Ethylbenzene-d10</i>		106%			75 - 125 %	"				
<i>4-Bromofluorobenzene (Surr)</i>		101%			85 - 120 %	"				
<i>Fluorobenzene (Surr)</i>		103%			75 - 125 %	"				
SSH0168-15 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
Bromomethane	8260B STD Dry	ND	0.00037	0.00097	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 19:05	
Chloroethane	"	ND	0.00026	0.00097	"	"	"	"	"	
Chloromethane	"	ND	0.00017	0.00097	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00017	0.00097	"	"	"	"	"	
Chloroform	"	ND	0.00014	0.00097	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00013	0.00097	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00015	0.00097	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00036	0.00097	"	"	"	"	"	
Trichloroethene	"	ND	0.00017	0.00097	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00017	0.00097	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000072	0.00097	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00011	0.00097	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000083	0.0019	"	"	"	"	"	
Bromoform	"	ND	0.000070	0.00097	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00035	0.00097	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00018	0.0019	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00033	0.00097	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>		104%			85 - 115 %	"				
<i>1,2-Dichloroethane-d4 (Surr)</i>		114%			75 - 125 %	"				
<i>4-Bromofluorobenzene (Surr)</i>		114%			85 - 120 %	"				



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-15RE1 (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
1,1-Dichloropropene	8260B STD Dry	ND	0.0019	0.041	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 22:06	
1,2-Dichlorobenzene	"	ND	0.0027	0.041	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.013	0.041	"	"	"	"	"	
Bromomethane	"	ND	0.026	0.15	"	"	"	"	"	
Chloroethane	"	ND	0.024	0.41	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0083	0.041	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0033	0.041	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0022	0.041	"	"	"	"	"	
Chloromethane	"	ND	0.062	0.41	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0032	0.041	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0052	0.021	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0052	0.041	"	"	"	"	"	
Vinyl chloride	"	ND	0.0018	0.0083	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0052	0.041	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0038	0.041	"	"	"	"	"	
Methylene Chloride	"	0.011	0.0039	0.041	"	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0029	0.041	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0025	0.041	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0036	0.041	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0039	0.041	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0032	0.041	"	"	"	"	"	
Chlorobromomethane	"	ND	0.012	0.041	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0041	0.017	"	"	"	"	"	
Benzene	"	ND	0.0026	0.017	"	"	"	"	"	
Chloroform	"	ND	0.0022	0.041	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0033	0.041	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0052	0.041	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0023	0.041	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0038	0.021	"	"	"	"	"	
Trichloroethene	"	ND	0.0035	0.017	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0040	0.012	"	"	"	"	"	
Dibromomethane	"	ND	0.0141	0.041	"	"	"	"	"	
Toluene	"	ND	0.0025	0.041	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0031	0.041	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0019	0.012	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0025	0.017	"	"	"	"	"	
Chlorobenzene	"	ND	0.0024	0.041	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0022	0.021	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-15REI (GTP7-10.0-082809)		Soil		Sampled: 08/28/09 13:27						
1,3-Dichloropropane	8260B STD Dry	ND	0.0052	0.041	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 22:06	
Ethylbenzene	"	ND	0.0038	0.041	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0030	0.041	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0083	0.041	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0034	0.010	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.0081	0.041	"	"	"	"	"	
o-Xylene	"	ND	0.0034	0.041	"	"	"	"	"	
Styrene	"	ND	0.0039	0.041	"	"	"	"	"	
Bromoforn	"	ND	0.011	0.041	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0019	0.041	"	"	"	"	"	
Bromobenzene	"	ND	0.0028	0.041	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0029	0.041	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.012	0.041	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0056	0.041	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0044	0.041	"	"	"	"	"	
n-Butylbenzene	"	ND	0.0076	0.041	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.068	0.21	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0052	0.041	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0052	0.041	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0038	0.041	"	"	"	"	"	
Naphthalene	"	ND	0.0062	0.041	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)										
			99%	85 - 115 %		"				
Ethylbenzene-d10			108%	75 - 125 %		"				
4-Bromofluorobenzene (Surr)			98%	85 - 120 %		"				
Trifluorotoluene (Surr)			90%	75 - 125 %		"				
Fluorobenzene (Surr)			107%	75 - 125 %		"				

SSH0168-16 (GTP7-18-082809)

Soil

Sampled: 08/28/09 13:58

Bromomethane	8260B STD Dry	ND	0.00029	0.00074	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 19:29	
Chloroethane	"	ND	0.00020	0.00074	"	"	"	"	"	
Chloromethane	"	ND	0.00013	0.00074	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00013	0.00074	"	"	"	"	"	
Chloroform	"	ND	0.00011	0.00074	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.000098	0.00074	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00012	0.00074	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00028	0.00074	"	"	"	"	"	
Trichloroethene	"	ND	0.00013	0.00074	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00013	0.00074	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-16 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
Dichlorobromomethane	82603 STD Dry	ND	0.000053	0.00074	mg/Kg dry	1x	49810	09/08/09 11:31	09/08/09 19:29	
cis-1,3-Dichloropropene	"	ND	0.000087	0.00074	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000065	0.0015	"	"	"	"	"	
Bromoform	"	ND	0.000053	0.00074	"	"	"	"	"	
1,2,3-Trichloropropene	"	ND	0.00027	0.00074	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00013	0.0015	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00025	0.00074	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		103%			85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)		105%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		112%			85 - 120 %	"				
SSH0168-16RE1 (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
1,1-Dichloropropene	82608 STD Dry	ND	0.0018	0.039	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 22:30	
1,2-Dichlorobenzene	"	ND	0.0025	0.039	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.013	0.039	"	"	"	"	"	
Bromomethane	"	ND	0.024	0.14	"	"	"	"	"	
Chloroethane	"	ND	0.022	0.39	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0078	0.039	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0031	0.039	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0021	0.039	"	"	"	"	"	
Chloromethane	"	ND	0.059	0.39	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0049	0.039	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0049	0.020	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0049	0.039	"	"	"	"	"	
Vinyl chloride	"	ND	0.0017	0.0078	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0049	0.039	"	"	"	"	"	
2,2-Dichloropropene	"	ND	0.0036	0.039	"	"	"	"	"	
Methylene Chloride	"	ND	0.0037	0.039	"	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0027	0.039	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0023	0.039	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0034	0.039	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0037	0.039	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0049	0.039	"	"	"	"	"	
Chlorobromomethane	"	ND	0.012	0.039	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0039	0.016	"	"	"	"	"	
Benzene	"	ND	0.0024	0.016	"	"	"	"	"	
Chloroform	"	ND	0.0021	0.039	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0031	0.039	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-16REI (GTP7-18-082809)		Soil		Sampled: 08/28/09 13:58						
1,1,1-Trichloroethane	8260B STD Dry	ND	0.0049	0.039	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 22:30	
1,2-Dichloroethane	"	ND	0.0021	0.039	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0036	0.020	"	"	"	"	"	
Trichloroethene	"	ND	0.0033	0.016	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0038	0.012	"	"	"	"	"	
Dibromomethane	"	ND	0.0039	0.039	"	"	"	"	"	
Toluene	"	ND	0.0023	0.039	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0029	0.039	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0018	0.012	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0023	0.016	"	"	"	"	"	
Chlorobenzene	"	ND	0.0022	0.039	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0021	0.020	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0049	0.039	"	"	"	"	"	
Ethylbenzene	"	ND	0.0036	0.039	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0047	0.039	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0078	0.039	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0032	0.0098	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.0076	0.039	"	"	"	"	"	
o-Xylene	"	ND	0.0022	0.039	"	"	"	"	"	
Styrene	"	ND	0.0037	0.039	"	"	"	"	"	
Bromoforn	"	ND	0.011	0.039	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0018	0.039	"	"	"	"	"	
Bromobenzene	"	ND	0.0026	0.039	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0027	0.039	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.011	0.039	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0053	0.039	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0041	0.039	"	"	"	"	"	
n-Butylbenzene	"	ND	0.0071	0.039	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.064	0.20	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0049	0.039	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0049	0.039	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0055	0.039	"	"	"	"	"	
Naphthalene	"	ND	0.0039	0.039	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)			96%		85 - 115 %	"				
Ethylbenzene-d10			107%		75 - 125 %	"				
4-Bromofluorobenzene (Surr)			96%		85 - 120 %	"				
Trifluorotoluene (Surr)			79%		75 - 125 %	"				
Fluorobenzene (Surr)			105%		75 - 125 %	"				

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-17 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
Bromomethane	8260B STD Dry	ND	0.00037	0.0015	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 18:01	
Chloroethane	"	ND	0.00039	0.0015	"	"	"	"	"	
Chloromethane	"	ND	0.00026	0.0015	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00026	0.0015	"	"	"	"	"	
Chloroform	"	ND	0.00022	0.0015	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00019	0.0015	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00023	0.0015	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00055	0.0015	"	"	"	"	"	
Trichloroethene	"	0.060 J	0.00026	0.0015	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00025	0.0015	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00011	0.0015	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00017	0.0015	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00013	0.0029	"	"	"	"	"	
Bromoform	"	ND	0.00011	0.0015	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00033	0.0015	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00027	0.0029	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00049	0.0015	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		122%			85 - 115 %	"				X. I
1,2-Dichloroethane-d4 (Surr)		116%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		127%			85 - 120 %	"				X. I

SSH0168-17RE1 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
1,1-Dichloropropene	8260B STD Dry	ND	0.0098	0.22	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 23:55	
1,2-Dichlorobenzene	"	ND	0.014	0.22	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.071	0.22	"	"	"	"	"	
Bromomethane	"	ND	0.14	0.77	"	"	"	"	"	
Chloroethane	"	ND	0.13	2.2	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.044	0.22	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.017	0.22	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.011	0.22	"	"	"	"	"	
Chloromethane	"	ND	0.33	2.2	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.027	0.22	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.027	0.11	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.027	0.22	"	"	"	"	"	
Vinyl chloride	"	ND	0.0093	0.044	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.027	0.22	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.020	0.22	"	"	"	"	"	
Methylene Chloride	"	1.6 J	0.021	0.22	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-17RE1 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
4-Isopropyltoluene	8260B STD Dry	ND	0.015	0.22	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 22:55	
cis-1,2-Dichloroethene	"	ND	0.013	0.22	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.019	0.22	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.021	0.22	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.027	0.22	"	"	"	"	"	
Chlorobromomethane	"	ND	0.066	0.22	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.022	0.087	"	"	"	"	"	
Benzene	"	ND	0.014	0.087	"	"	"	"	"	
Chloroform	"	ND	0.011	0.22	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.017	0.22	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.027	0.22	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.012	0.22	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.020	0.11	"	"	"	"	"	
Trichloroethene	"	0.98	0.019	0.087	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.021	0.066	"	"	"	"	"	
Dibromomethane	"	ND	0.022	0.22	"	"	"	"	"	
Toluene	"	0.040	0.013	0.22	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.016	0.22	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0098	0.066	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.013	0.087	"	"	"	"	"	
Chlorobenzene	"	ND	0.013	0.22	"	"	"	"	"	
Tetrachloroethene	"	ND	0.011	0.11	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.027	0.22	"	"	"	"	"	
Ethylbenzene	"	ND	0.020	0.22	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.026	0.22	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.044	0.22	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.018	0.055	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.048	0.043	0.22	"	"	"	"	"	J
o-Xylene	"	0.017	0.013	0.22	"	"	"	"	"	J
Styrene	"	ND	0.021	0.22	"	"	"	"	"	
Bromoform	"	ND	0.060	0.22	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0198	0.22	"	"	"	"	"	
Bromobenzene	"	ND	0.015	0.22	"	"	"	"	"	
N-Propylbenzene	"	ND	0.015	0.22	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.063	0.22	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.030	0.22	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.033	0.22	"	"	"	"	"	
n-Butylbenzene	"	ND	0.040	0.22	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-17RE1 (GTP2-2.5-082709)		Soil		Sampled: 08/27/09 11:40						
1,2-Dibromo-3-Chloropropane	8260B STD Dry	ND	0.36	1.1	mg/Kg dry	1x	4992R	09/09/09 15:36	09/09/09 22:55	
1,2,4-Trichlorobenzene	"	ND	0.027	0.22	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.027	0.22	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.031	0.22	"	"	"	"	"	
Naphthalene	"	ND	0.033	0.22	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>		99%			85 - 115 %	"			"	
<i>Ethylbenzene-d10</i>		100%			75 - 125 %	"			"	
<i>4-Bromofluorobenzene (Surr)</i>		99%			85 - 120 %	"			"	
<i>Fluorobenzene (Surr)</i>		104%			75 - 125 %	"			"	

SSH0168-18 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
Bromomethane	8260B STD Dry	ND	0.00042	0.0011	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 18:25	
Chloroethane	"	ND	0.00029	0.0011	"	"	"	"	"	
Chloromethane	"	ND	0.00019	0.0011	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00019	0.0011	"	"	"	"	"	
Chloroform	"	ND	0.00016	0.0011	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00014	0.0011	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00017	0.0011	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00040	0.0011	"	"	"	"	"	
Trichloroethene	"	0.011	0.00019	0.0011	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00018	0.0011	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000080	0.0011	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00013	0.0011	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000095	0.0022	"	"	"	"	"	
Bromoform	"	ND	0.000078	0.0011	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00039	0.0011	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00020	0.0022	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00036	0.0011	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>		104%			85 - 115 %	"			"	
<i>1,2-Dichloroethane-d4 (Surr)</i>		102%			75 - 125 %	"			"	
<i>4-Bromofluorobenzene (Surr)</i>		110%			85 - 120 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18RE1 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
1,1-Dichloropropene	8260B STD Dry	ND	0.0032	0.072	mg/Kg dry	1x	49028	09/09/09 15:36	09/09/09 23:19	
1,2-Dichlorobenzene	"	ND	0.0047	0.072	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.023	0.072	"	"	"	"	"	
Bromomethane	"	ND	0.045	0.25	"	"	"	"	"	
Chloroethane	"	ND	0.041	0.72	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.014	0.072	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0058	0.072	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0038	0.072	"	"	"	"	"	
Chloromethane	"	ND	0.11	0.72	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0090	0.072	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0090	0.036	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0090	0.072	"	"	"	"	"	
Vinyl chloride	"	ND	0.0031	0.014	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0090	0.072	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0067	0.072	"	"	"	"	"	
Methylene Chloride	"	0.23 J	0.0068	0.072	"	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0050	0.072	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0043	0.072	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0063	0.072	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0068	0.072	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0090	0.072	"	"	"	"	"	
Chlorobromomethane	"	ND	0.022	0.072	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0072	0.029	"	"	"	"	"	
Benzene	"	ND	0.0045	0.029	"	"	"	"	"	
Chloroform	"	ND	0.0038	0.072	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0058	0.072	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0090	0.072	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0040	0.072	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0067	0.036	"	"	"	"	"	
Trichloroethene	"	0.17	0.0061	0.029	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0070	0.022	"	"	"	"	"	
Dibromomethane	"	ND	0.0072	0.072	"	"	"	"	"	
Toluene	"	0.013	0.0043	0.072	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.0034	0.072	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0032	0.022	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0043	0.029	"	"	"	"	"	
Chlorobenzene	"	ND	0.0041	0.072	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0038	0.036	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-18RE1 (GTP2-8-082709)		Soil		Sampled: 08/27/09 11:58						
1,3-Dichloropropane	8260B STD Dry	ND	0.0090	0.072	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 23:19	
Ethylbenzene	"	ND	0.0067	0.072	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0086	0.072	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.014	0.072	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0039	0.018	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.014	0.072	"	"	"	"	"	
o-Xylene	"	ND	0.0041	0.072	"	"	"	"	"	
Styrene	"	ND	0.0068	0.072	"	"	"	"	"	
Bromoform	"	ND	0.020	0.072	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0032	0.072	"	"	"	"	"	
Bromobenzene	"	ND	0.0049	0.072	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0030	0.072	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.021	0.072	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0097	0.072	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0076	0.072	"	"	"	"	"	
n-Butylbenzene	"	ND	0.013	0.072	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.12	0.36	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0090	0.072	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0090	0.072	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.010	0.072	"	"	"	"	"	
Naphthalene	"	ND	0.011	0.072	"	"	"	"	"	
<hr/>										
Surrogate(s): Toluene-d8 (Surr)			103%		85 - 115 %	"				
Ethylbenzene-d10			104%		75 - 125 %	"				
4-Bromofluorobenzene (Surr)			104%		85 - 120 %	"				
Fluorobenzene (Surr)			107%		75 - 125 %	"				

SSH0168-19 (GTP2-13-082709)

Soil

Sampled: 08/27/09 17:28

Bromomethane	8260B STD Dry	ND	0.00042	0.0011	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 18:49	
Chloroethane	"	ND	0.00029	0.0011	"	"	"	"	"	
Chloromethane	"	ND	0.00019	0.0011	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00020	0.0011	"	"	"	"	"	
Chloroform	"	ND	0.00016	0.0011	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00015	0.0011	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00018	0.0011	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00041	0.0011	"	"	"	"	"	
Trichloroethylene	"	0.0011	0.00019	0.0011	"	"	"	"	"	J
1,3-Dichloropropane	"	ND	0.00019	0.0011	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000081	0.0011	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/01/09 10:07
Redmond, WA 98077	Project Manager: Doug Morell	

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-19 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
cis-1,3-Dichloropropene	8260B STD Dry	ND	0.00013	0.0011	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 18:49	
1,1,2,2-Tetrachloroethane	"	ND	0.000097	0.0022	"	"	"	"	"	
Bromoform	"	ND	0.000079	0.0011	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00010	0.0011	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00020	0.0022	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00037	0.0011	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		101%			85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)		104%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		104%			85 - 120 %	"				
SSH0168-19RE1 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
1,1-Dichloropropene	8260B STD Dry	ND	0.0025	0.055	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 23:44	
1,2-Dichlorobenzene	"	ND	0.0036	0.055	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.018	0.055	"	"	"	"	"	
Bromomethane	"	ND	0.034	0.19	"	"	"	"	"	
Chloroethane	"	ND	0.032	0.55	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.011	0.055	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0044	0.055	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0029	0.055	"	"	"	"	"	
Chloromethane	"	ND	0.083	0.55	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0069	0.055	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0069	0.028	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0069	0.055	"	"	"	"	"	
Vinyl chloride	"	ND	0.0023	0.011	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0069	0.055	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0051	0.055	"	"	"	"	"	
Methylene Chloride	"	0.018	0.0052	0.055	"	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0039	0.055	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0033	0.055	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0048	0.055	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0052	0.055	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0069	0.055	"	"	"	"	"	
Chlorobromomethane	"	ND	0.017	0.055	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0055	0.022	"	"	"	"	"	
Benzene	"	ND	0.0034	0.022	"	"	"	"	"	
Chloroform	"	ND	0.0029	0.055	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0044	0.055	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0069	0.055	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-19RE1 (GTP2-13-082709)		Soil		Sampled: 08/27/09 17:28						
1,2-Dichloroethane	8260B STD Dry	ND	0.0030	0.055	mg/Kg dry	1x	49928	09/09/09 15:36	09/09/09 23:44	
Carbon tetrachloride	"	ND	0.0031	0.028	"	"	"	"	"	
Trichloroethene	"	0.056	0.0047	0.022	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0054	0.017	"	"	"	"	"	
Dibromomethane	"	ND	0.0055	0.055	"	"	"	"	"	
Toluene	"	ND	0.0033	0.055	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0041	0.055	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0025	0.017	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0033	0.022	"	"	"	"	"	
Chlorobenzene	"	ND	0.0032	0.055	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0029	0.028	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0069	0.055	"	"	"	"	"	
Ethylbenzene	"	ND	0.0051	0.055	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0066	0.055	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.011	0.055	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0045	0.014	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.011	0.055	"	"	"	"	"	
o-Xylene	"	ND	0.0032	0.055	"	"	"	"	"	
Styrene	"	ND	0.0052	0.055	"	"	"	"	"	
Bromoform	"	ND	0.015	0.055	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0023	0.055	"	"	"	"	"	
Bromobenzene	"	ND	0.0037	0.055	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0039	0.055	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.016	0.055	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0074	0.055	"	"	"	"	"	
1,3,5-Trimeethylbenzene	"	ND	0.0058	0.055	"	"	"	"	"	
n-Butylbenzene	"	ND	0.010	0.055	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.091	0.28	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0069	0.055	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0069	0.055	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0077	0.055	"	"	"	"	"	
Naphthalene	"	ND	0.0083	0.055	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		99%		85 - 115 %	"					
Ethylbenzene-d10		105%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		98%		85 - 120 %	"					
Fluorobenzene (Surr)		102%		75 - 125 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/01/09 10:07
Redmond, WA 98077	Project Manager: Doug Morel	

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20 (GTP1-2.5-082709)		Soil							Sampled: 08/27/09 09:20	
Bromomethane	8260B STD Dry	ND	0.00039	0.0015	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 19:13	
Chloroethane	"	ND	0.00041	0.0015	"	"	"	"	"	
Chloromethane	"	ND	0.00027	0.0015	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00027	0.0015	"	"	"	"	"	
Chloroform	"	ND	0.00023	0.0015	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00020	0.0015	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00025	0.0015	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00057	0.0015	"	"	"	"	"	
Trichloroethene	"	ND	0.00027	0.0015	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00026	0.0015	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00011	0.0015	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00018	0.0015	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.00014	0.0031	"	"	"	"	"	
Bromoform	"	ND	0.00011	0.0015	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00055	0.0015	"	"	"	"	"	
1,3-Dibromo-3-Chloropropane	"	ND	0.00028	0.0031	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00052	0.0015	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		130%			85 - 115 %	"				X. 1
1,2-Dichloroethane-d4 (Surr)		120%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		136%			85 - 120 %	"				X. 1

SSH0168-20RE1 (GTP1-2.5-082709)		Soil							Sampled: 08/27/09 09:20	
1,1-Dichloropropene	8260B STD Dry	ND	0.0066	0.15	mg/Kg dry	1x	49928	09/09/09 15:36	09/10/09 00:08	
1,2-Dichlorobenzene	"	ND	0.0096	0.15	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.048	0.15	"	"	"	"	"	
Bromomethane	"	ND	0.093	0.52	"	"	"	"	"	
Chloroethane	"	ND	0.085	1.5	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.030	0.15	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.012	0.15	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.14	0.0078	0.15	"	"	"	"	"	J
Chloromethane	"	ND	0.22	1.5	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.018	0.15	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.018	0.074	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.018	0.15	"	"	"	"	"	
Vinyl chloride	"	ND	0.0063	0.030	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.018	0.15	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.014	0.15	"	"	"	"	"	
Methylene Chloride	"	0.054	0.014	0.15	u	"	"	"	"	J. D.

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20RE1 (GTPI-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
4-Isopropyltoluene	\$260B STD Dry	0.043	0.010	0.15	mg/Kg dry	1x	49928	09/09/09 15:36	09/16/09 00:08	J
cis-1,2-Dichloroethene	"	ND	0.0089	0.15	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.013	0.15	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.014	0.15	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.018	0.15	"	"	"	"	"	
Chlorobromomethane	"	ND	0.044	0.15	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.015	0.059	"	"	"	"	"	
Benzene	"	0.044	0.0092	0.059	"	"	"	"	"	J
Chloroform	"	ND	0.0078	0.15	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.012	0.15	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.018	0.15	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0081	0.15	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.014	0.074	"	"	"	"	"	
Trichloroethene	"	ND	0.013	0.059	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.014	0.044	"	"	"	"	"	
Dibromomethane	"	ND	0.015	0.15	"	"	"	"	"	
Toluene	"	0.40	0.0089	0.15	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.011	0.15	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0066	0.044	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0089	0.059	"	"	"	"	"	
Chlorobenzene	"	ND	0.0085	0.15	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0078	0.074	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.018	0.15	"	"	"	"	"	
Ethylbenzene	"	0.14	0.014	0.15	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.018	0.15	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.030	0.15	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.012	0.037	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.41	0.029	0.15	"	"	"	"	"	
o-Xylene	"	0.17	0.0085	0.15	"	"	"	"	"	
Styrene	"	ND	0.014	0.15	"	"	"	"	"	
Bromoform	"	ND	0.041	0.15	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0066	0.15	"	"	"	"	"	
Bromobenzene	"	ND	0.010	0.15	"	"	"	"	"	
N-Propylbenzene	"	0.031	0.010	0.15	"	"	"	"	"	J
1,2,3-Trichloropropane	"	ND	0.043	0.15	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.020	0.15	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	0.048	0.016	0.15	"	"	"	"	"	J
n-Butylbenzene	"	ND	0.027	0.15	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.24	0.74	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-20RE1 (GTP1-2.5-082709)		Soil		Sampled: 08/27/09 09:20						
1,2,4-Trichlorobenzene	"	ND	0.018	0.15	"	"	"	"	"	"
1,2,3-Trichlorobenzene	"	ND	0.018	0.15	"	"	"	"	"	"
Hexachlorobutadiene	"	ND	0.021	0.15	"	"	"	"	"	"
Naphthalene	"	ND	0.022	0.15	"	"	"	"	"	"
Surrogate(s): Toluene-d8 (Surr)		101%		85 - 115 %	"				"	
Ethylbenzene-d10		103%		75 - 125 %	"				"	
4-Bromofluorobenzene (Surr)		98%		85 - 120 %	"				"	
Fluorobenzene (Surr)		102%		75 - 125 %	"				"	
SSH0168-21 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
Bromomethane	8260B STD Dry	ND	0.00042	0.0011	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 19:37	
Chloroethane	"	ND	0.00030	0.0011	"	"	"	"	"	
Chloromethane	"	ND	0.00019	0.0011	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00020	0.0011	"	"	"	"	"	
Chloroform	"	ND	0.00016	0.0011	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00015	0.0011	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00018	0.0011	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00041	0.0011	"	"	"	"	"	
Trichloroethene	"	0.00041	0.00019	0.0011	"	"	"	"	"	J
1,3-Dichloropropane	"	ND	0.00019	0.0011	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000082	0.0011	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.00013	0.0011	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000097	0.0022	"	"	"	"	"	
Bromoform	"	ND	0.000079	0.0011	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00040	0.0011	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00020	0.0022	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00037	0.0011	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		104%		85 - 115 %	"				"	
1,2-Dichloroethane-d4 (Surr)		105%		75 - 125 %	"				"	
4-Bromofluorobenzene (Surr)		109%		85 - 120 %	"				"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-21RE1 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
1,1-Dichloropropene	8260B STD Dry	ND	0.0034	0.053	mg/Kg dry	1x	49928	09/09/09 15:36	09/10/09 00:32	
1,2-Dichlorobenzene	"	ND	0.0034	0.053	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.017	0.053	"	"	"	"	"	
Bromomethane	"	ND	0.033	0.18	"	"	"	"	"	
Chloroethane	"	ND	0.030	0.53	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.011	0.053	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0042	0.053	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.0028	0.053	"	"	"	"	"	
Chloromethane	"	ND	0.079	0.53	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0066	0.053	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0066	0.026	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0066	0.053	"	"	"	"	"	
Vinyl chloride	"	ND	0.0022	0.011	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0066	0.053	"	"	"	"	"	
2,2-Dichloropropene	"	ND	0.0049	0.053	"	"	"	"	"	
Methylene Chloride	"	0.061	0.0050	0.053	u	"	"	"	"	
4-Isopropyltoluene	"	ND	0.0037	0.053	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0032	0.053	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0046	0.053	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0050	0.053	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0066	0.053	"	"	"	"	"	
Chlorobromomethane	"	ND	0.016	0.053	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0033	0.021	"	"	"	"	"	
Benzene	"	ND	0.0033	0.021	"	"	"	"	"	
Chloroform	"	ND	0.0028	0.053	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0042	0.053	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0066	0.053	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0029	0.053	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0049	0.026	"	"	"	"	"	
Trichloroethene	"	0.036	0.0045	0.021	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0051	0.016	"	"	"	"	"	
Dibromomethane	"	ND	0.0053	0.053	"	"	"	"	"	
Toluene	"	ND	0.0032	0.053	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0039	0.053	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0024	0.016	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0032	0.021	"	"	"	"	"	
Chlorobenzene	"	ND	0.0030	0.053	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0028	0.026	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-21RE1 (GTP5-11-082809)		Soil		Sampled: 08/28/09 09:37						
1,3-Dichloropropane	8260B STD Dry	ND	0.0066	0.053	mg/Kg dry	1x	49028	09/09/09 15:36	09/10/09 00:32	
Ethylbenzene	"	ND	0.0049	0.053	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0063	0.053	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.011	0.053	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0043	0.013	"	"	"	"	"	
m-Xylene & p-Xylene	"	ND	0.010	0.053	"	"	"	"	"	
o-Xylene	"	ND	0.0030	0.053	"	"	"	"	"	
Styrene	"	ND	0.0030	0.053	"	"	"	"	"	
Bromoform	"	ND	0.014	0.053	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0024	0.053	"	"	"	"	"	
Bromobenzene	"	ND	0.0036	0.053	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0037	0.053	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.013	0.053	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0071	0.053	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0055	0.053	"	"	"	"	"	
n-Butylbenzene	"	ND	0.0096	0.053	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.0087	0.26	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0066	0.053	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0066	0.053	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0074	0.053	"	"	"	"	"	
Naphthalene	"	ND	0.0079	0.053	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		95%			85 - 115 %	"				
Ethylbenzene-d10		108%			75 - 125 %	"				
4-Bromofluorobenzene (Surr)		100%			85 - 120 %	"				
Trifluorotoluene (Surr)		89%			75 - 125 %	"				
Fluorobenzene (Surr)		103%			75 - 125 %	"				

SSH0168-22 (TS-COMP-1)

Soil

Sampled: 08/27/09 18:10

Bromomethane	8260B STD Dry	ND	0.00016	0.00042	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 20:00	
Chloroethane	"	ND	0.00011	0.00042	"	"	"	"	"	
Chloromethane	"	ND	0.000075	0.00042	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.000075	0.00042	"	"	"	"	"	
Chloroform	"	ND	0.000063	0.00042	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.000056	0.00042	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.000068	0.00042	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00016	0.00042	"	"	"	"	"	
Trichloroethene	"	ND	0.000075	0.00042	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.000072	0.00042	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
Dichlorobromomethane	8260B STD Dry	ND	0.000031	0.00042	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 20:00	
cis-1,3-Dichloropropene	"	ND	0.000050	0.00042	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000037	0.00085	"	"	"	"	"	
Bromoform	"	ND	0.000030	0.00042	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00015	0.00042	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.000077	0.00085	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00014	0.00042	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)			106%		85 - 115 %	"				
1,2-Dichloroethane-d4 (Surr)			131%		75 - 125 %	"				X. I
4-Bromofluorobenzene (Surr)			108%		85 - 120 %	"				

SSH0168-22RE1 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
1,1-Dichloropropene	8260B STD Dry	ND	0.0027	0.060	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 08:57	
1,2-Dichlorobenzene	"	0.037	0.0039	0.060	"	"	"	"	"	J
4-Chlorotoluene	"	ND	0.020	0.060	"	"	"	"	"	
Bromomethane	"	ND	0.038	0.21	"	"	"	"	"	
Chloroethane	"	ND	0.035	0.60	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.012	0.060	"	"	"	"	"	
tert-Butylbenzene	"	0.020	0.0048	0.060	"	"	"	"	"	J
1,2,4-Trimethylbenzene	"	0.048	0.0032	0.060	"	"	"	"	"	J
Chloromethane	"	ND	0.090	0.60	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0075	0.060	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0075	0.030	"	"	"	"	"	
sec-Butylbenzene	"	0.28	0.0075	0.060	"	"	"	"	"	
Vinyl chloride	"	ND	0.0026	0.012	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0056	0.060	"	"	"	"	"	
Methylene Chloride	"	0.081	0.0057	0.060	"	"	"	"	"	
4-Isopropyltoluene	"	0.094	0.0042	0.060	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0036	0.060	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0033	0.060	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0057	0.060	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
Chlorobromomethane	"	ND	0.018	0.060	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0060	0.024	"	"	"	"	"	
Benzene	"	ND	0.0038	0.024	"	"	"	"	"	
Chloroform	"	ND	0.0032	0.060	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0048	0.060	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-22RE1 (TS-COMP-1)		Soil		Sampled: 08/27/09 18:10						
1,1,1-Trichloroethane	8260B STD Dry	ND	0.0075	0.060	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 08:57	
1,2-Dichloroethane	"	ND	0.0033	0.060	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0056	0.030	"	"	"	"	"	
Trichloroethene	"	ND	0.0051	0.024	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0059	0.018	"	"	"	"	"	
Dibromomethane	"	ND	0.0060	0.060	"	"	"	"	"	
Toluene	"	0.0096	0.0036	0.060	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.0045	0.060	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0027	0.018	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0036	0.024	"	"	"	"	"	
Chlorobenzene	"	ND	0.0035	0.060	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0032	0.030	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0075	0.060	"	"	"	"	"	
Ethylbenzene	"	0.070	0.0056	0.060	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0073	0.060	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.012	0.060	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0050	0.015	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.014	0.012	0.060	"	"	"	"	"	J
o-Xylene	"	ND	0.0035	0.060	"	"	"	"	"	
Styrene	"	ND	0.0057	0.060	"	"	"	"	"	
Bromoforn	"	ND	0.017	0.060	"	"	"	"	"	
Isopropylbenzene	"	0.16	0.0027	0.060	"	"	"	"	"	
Bromobenzene	"	ND	0.0041	0.060	"	"	"	"	"	
N-Propylbenzene	"	0.33	0.0042	0.060	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.017	0.060	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0081	0.060	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0063	0.060	"	"	"	"	"	
n-Butylbenzene	"	0.71	0.011	0.060	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.099	0.30	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0075	0.060	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0084	0.060	"	"	"	"	"	
Naphthalene	"	1.9	0.0090	0.060	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		98%		85 - 115 %	"					
Ethylbenzene-d10		104%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		100%		85 - 120 %	"					
Fluorobenzene (Surr)		106%		75 - 125 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-23 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
Bromomethane	8260B STD Dry	ND	0.000093	0.00024	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 20:24	
Chloroethane	"	ND	0.000065	0.00024	"	"	"	"	"	
Chloromethane	"	ND	0.000043	0.00024	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.000043	0.00024	"	"	"	"	"	
Chloroform	"	ND	0.000036	0.00024	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.000032	0.00024	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.000039	0.00024	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.000090	0.00024	"	"	"	"	"	
Trichloroethene	"	ND	0.000043	0.00024	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.000041	0.00024	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000018	0.00024	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.000028	0.00024	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000021	0.00048	"	"	"	"	"	
Bromoform	"	ND	0.000017	0.00024	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.000007	0.00024	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.000044	0.00048	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.000081	0.00024	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Sur)		113%			85 - 115 %	"				
1,2-Dichloroethane-d4 (Sur)		112%			75 - 125 %	"				
4-Bromofluorobenzene (Sur)		138%			85 - 120 %	"				X. 1

SSH0168-23RE1 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
1,1-Dichloropropene	8260B STD Dry	ND	0.0014	0.030	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 09:21	
1,2-Dichlorobenzene	"	0.037	0.0020	0.030	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.0098	0.030	"	"	"	"	"	
Bromomethane	"	ND	0.019	0.11	"	"	"	"	"	
Chloroethane	"	ND	0.017	0.30	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0061	0.030	"	"	"	"	"	
tert-Butylbenzene	"	0.014	0.0024	0.030	"	"	"	"	"	J
1,2,4-Trimethylbenzene	"	0.13	0.0016	0.030	"	"	"	"	"	
Chloromethane	"	ND	0.045	0.30	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0038	0.030	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0038	0.015	"	"	"	"	"	
sec-Butylbenzene	"	0.12	0.0038	0.030	"	"	"	"	"	
Vinyl chloride	"	ND	0.0013	0.0061	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0038	0.030	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0028	0.030	"	"	"	"	"	
Methylene Chloride	"	0.066	0.0029	0.030	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-23RE1 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
4-Isopropyltoluene	8260B STD Dry	0.064	0.0021	0.030	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 09:21	
cis-1,2-Dichloroethene	"	ND	0.0018	0.030	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0027	0.030	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0029	0.030	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0038	0.030	"	"	"	"	"	
Chlorobromomethane	"	ND	0.0091	0.030	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0030	0.012	"	"	"	"	"	
Benzene	"	ND	0.0019	0.012	"	"	"	"	"	
Chloroform	"	ND	0.0016	0.030	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0024	0.030	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0038	0.030	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0017	0.030	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0028	0.015	"	"	"	"	"	
Trichloroethene	"	ND	0.0026	0.012	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0030	0.0091	"	"	"	"	"	
Dibromomethane	"	ND	0.0030	0.030	"	"	"	"	"	
Toluene	"	0.0053	0.0018	0.030	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.0023	0.030	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0014	0.0091	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0018	0.012	"	"	"	"	"	
Chlorobenzene	"	ND	0.0017	0.030	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0016	0.015	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0038	0.030	"	"	"	"	"	
Ethylbenzene	"	0.044	0.0028	0.030	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0036	0.030	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0061	0.030	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0023	0.0076	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.017	0.0059	0.030	"	"	"	"	"	J
o-Xylene	"	0.020	0.0017	0.030	"	"	"	"	"	J
Styrene	"	ND	0.0029	0.030	"	"	"	"	"	
Bromoform	"	ND	0.0083	0.030	"	"	"	"	"	
Isopropylbenzene	"	0.082	0.0014	0.030	"	"	"	"	"	
Bromobenzene	"	ND	0.0020	0.030	"	"	"	"	"	
N-Propylbenzene	"	0.14	0.0021	0.030	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.0088	0.030	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0041	0.030	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	0.0075	0.0032	0.030	"	"	"	"	"	J
n-Butylbenzene	"	ND	0.0055	0.030	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.050	0.15	"	"	"	"	"	

TestAmerica Spokane

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[Signature]

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-23RE1 (TS-COMP-2)		Soil		Sampled: 08/27/09 18:28						
1,2,4-Trichlorobenzene	"	ND	0.0038	0.030	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0038	0.030	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0042	0.030	"	"	"	"	"	
Naphthalene	"	2.0	0.0045	0.030	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		101%			85 - 115 %	"			"	
Ethylbenzene-d10		104%			75 - 125 %	"			"	
4-Bromofluorobenzene (Surr)		102%			85 - 120 %	"			"	
Fluorobenzene (Surr)		102%			75 - 125 %	"			"	

SSH0168-24 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
Bromomethane	8260B STD Dry	ND	0.00021	0.00054	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 20:48	
Chloroethane	"	ND	0.00014	0.00054	"	"	"	"	"	
Chloromethane	"	ND	0.000095	0.00054	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.000096	0.00054	"	"	"	"	"	
Chloroform	"	ND	0.000080	0.00054	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.000071	0.00054	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.000086	0.00054	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.000020	0.00054	"	"	"	"	"	
Trichloroethene	"	ND	0.000095	0.00054	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.000092	0.00054	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.000040	0.00054	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.000063	0.00054	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.000047	0.0011	"	"	"	"	"	
Bromoform	"	ND	0.000039	0.00054	"	"	"	"	"	
1,2,3-Trichloropropene	"	ND	0.00019	0.00054	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.000098	0.0011	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00018	0.00054	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		110%			85 - 115 %	"			"	
1,2-Dichloroethane-d4 (Surr)		129%			75 - 125 %	"			"	X.1
4-Bromofluorobenzene (Surr)		102%			85 - 120 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24RE1 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
1,1-Dichloropropene	8260B STD Dry	ND	0.0019	0.041	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 09:45	
1,2-Dichlorobenzene	"	0.015	0.0027	0.041	"	"	"	"	"	J
4-Chlorotoluene	"	ND	0.013	0.041	"	"	"	"	"	
Bromomethane	"	ND	0.026	0.14	"	"	"	"	"	
Chloroethane	"	ND	0.024	0.41	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.0083	0.041	"	"	"	"	"	
tert-Butylbenzene	"	0.015	0.0033	0.041	"	"	"	"	"	J
1,2,4-Trimethylbenzene	"	ND	0.0022	0.041	"	"	"	"	"	
Chloromethane	"	ND	0.062	0.41	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0052	0.041	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0032	0.021	"	"	"	"	"	
sec-Butylbenzene	"	0.29	0.0032	0.041	"	"	"	"	"	
Vinyl chloride	"	ND	0.0018	0.0083	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0032	0.041	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0038	0.041	"	"	"	"	"	
Methylene Chloride	"	ND	0.0039	0.041	"	"	"	"	"	
4-Isopropyltoluene	"	0.014	0.0029	0.041	"	"	"	"	"	J
cis-1,2-Dichloroethene	"	ND	0.0025	0.041	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0036	0.041	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0039	0.041	"	"	"	"	"	
1,4-Dichlorobenzene	"	0.0064	0.0032	0.041	"	"	"	"	"	J
Chlorobromomethane	"	ND	0.012	0.041	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0041	0.017	"	"	"	"	"	
Benzene	"	ND	0.0026	0.017	"	"	"	"	"	
Chloroform	"	ND	0.0022	0.041	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0033	0.041	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0032	0.041	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.0023	0.041	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.0038	0.021	"	"	"	"	"	
Trichloroethene	"	ND	0.0035	0.017	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0040	0.012	"	"	"	"	"	
Dibromomethane	"	ND	0.0041	0.041	"	"	"	"	"	
Toluene	"	ND	0.0025	0.041	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.0031	0.041	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0019	0.012	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0025	0.017	"	"	"	"	"	
Chlorobenzene	"	ND	0.0024	0.041	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0022	0.021	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-24RE1 (TS-COMP-3)		Soil		Sampled: 08/27/09 16:40						
1,3-Dichloropropane	8260B STD Dry	ND	0.0052	0.041	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 09:45	
Ethylbenzene	"	ND	0.0038	0.041	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0050	0.041	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.0083	0.041	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0034	0.010	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.010	0.0081	0.041	"	"	"	"	"	
o-Xylene	"	ND	0.0024	0.041	"	"	"	"	"	
Styrene	"	ND	0.0039	0.041	"	"	"	"	"	
Bromoform	"	ND	0.011	0.041	"	"	"	"	"	
Isopropylbenzene	"	0.069	0.0019	0.041	"	"	"	"	"	
Bromobenzene	"	ND	0.0028	0.041	"	"	"	"	"	
N-Propylbenzene	"	0.11	0.0029	0.041	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.012	0.041	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0036	0.041	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.0043	0.041	"	"	"	"	"	
n-Butylbenzene	"	0.61	0.0075	0.041	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.068	0.21	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0052	0.041	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0052	0.041	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0058	0.041	"	"	"	"	"	
Naphthalene	"	0.37	0.0062	0.041	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		103%			85 - 115 %	"			"	
Ethylbenzene-d10		108%			75 - 125 %	"			"	
4-Bromofluorobenzene (Surr)		100%			85 - 120 %	"			"	
Fluorobenzene (Surr)		101%			75 - 125 %	"			"	

SSH0168-25 (GTP4-6.0-082709)

Soil

Sampled: 08/27/09 15:49

Bromomethane	8260B STD Dry	ND	0.00053	0.0014	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 21:12	
Chloroethane	"	ND	0.00037	0.0014	"	"	"	"	"	
Chloromethane	"	ND	0.00024	0.0014	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.00025	0.0014	"	"	"	"	"	
Chloroform	"	ND	0.00020	0.0014	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.00018	0.0014	"	"	"	"	"	
1,2-Dichloroethane	"	ND	0.00022	0.0014	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.00051	0.0014	"	"	"	"	"	
Trichloroethene	"	ND	0.00024	0.0014	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.00024	0.0014	"	"	"	"	"	
Dichlorobromomethane	"	ND	0.00010	0.0014	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-25 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
cis-1,3-Dichloropropene	8260B STD Dry	ND	0.00016	0.0014	mg/Kg dry	1x	49722	09/04/09 12:30	09/04/09 21:12	
1,1,2,2-Tetrachloroethane	"	ND	0.00012	0.0028	"	"	"	"	"	
Bromoform	"	ND	0.000099	0.0014	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.00050	0.0014	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.00025	0.0028	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.00046	0.0014	"	"	"	"	"	
<i>Surrogate(s): Toluene-d8 (Surr)</i>										
		108%			85 - 115 %	"				
<i>1,2-Dichloroethane-d4 (Surr)</i>										
		98%			75 - 125 %	"				
<i>4-Bromofluorobenzene (Surr)</i>										
		114%			85 - 120 %	"				
SSH0168-25RE1 (GTP4-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
1,1-Dichloropropene	8260B STD Dry	ND	0.0028	0.061	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 10:09	
1,2-Dichlorobenzene	"	ND	0.0040	0.061	"	"	"	"	"	
4-Chlorotoluene	"	ND	0.020	0.061	"	"	"	"	"	
Bromomethane	"	ND	0.038	0.22	"	"	"	"	"	
Chloroethane	"	ND	0.035	0.61	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	0.012	0.061	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.0049	0.061	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	0.054	0.0032	0.061	"	"	"	"	"	J
Chloromethane	"	ND	0.092	0.61	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.0077	0.061	"	"	"	"	"	
1,1-Dichloroethene	"	ND	0.0077	0.031	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.0077	0.061	"	"	"	"	"	
Vinyl chloride	"	ND	0.0026	0.012	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.0077	0.061	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.0057	0.061	"	"	"	"	"	
Methylene Chloride	"	0.014	0.0058	0.061	"	"	"	"	"	J
4-Isopropyltoluene	"	ND	0.0043	0.061	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.0037	0.061	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	0.0054	0.061	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.0058	0.061	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	0.0077	0.061	"	"	"	"	"	
Chlorobromomethane	"	ND	0.018	0.061	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	0.0061	0.025	"	"	"	"	"	
Benzene	"	ND	0.0038	0.025	"	"	"	"	"	
Chloroform	"	ND	0.0032	0.061	"	"	"	"	"	
Ethylene Dibromide	"	ND	0.0049	0.061	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	0.0077	0.061	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/01/09 10:07

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSH0168-25RE1 (GT14-6.0-082709)		Soil		Sampled: 08/27/09 15:49						
1,2-Dichloroethane	8260B STD Dry	ND	0.0034	0.061	mg/Kg dry	1x	49942	09/09/09 17:34	09/10/09 10:09	
Carbon tetrachloride	"	ND	0.0037	0.031	"	"	"	"	"	
Trichloroethene	"	ND	0.0032	0.025	"	"	"	"	"	
1,2-Dichloropropane	"	ND	0.0060	0.018	"	"	"	"	"	
Dibromomethane	"	ND	0.0061	0.061	"	"	"	"	"	
Toluene	"	0.031	0.0037	0.061	"	"	"	"	"	J
Dichlorobromomethane	"	ND	0.0046	0.061	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	0.0028	0.018	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.0037	0.025	"	"	"	"	"	
Chlorobenzene	"	ND	0.0033	0.061	"	"	"	"	"	
Tetrachloroethene	"	ND	0.0032	0.031	"	"	"	"	"	
1,3-Dichloropropane	"	ND	0.0077	0.061	"	"	"	"	"	
Ethylbenzene	"	0.0068	0.0037	0.061	"	"	"	"	"	J
1,1,1,2-Tetrachloroethane	"	ND	0.0074	0.061	"	"	"	"	"	
Chlorodibromomethane	"	ND	0.012	0.061	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0051	0.015	"	"	"	"	"	
m-Xylene & p-Xylene	"	0.087	0.012	0.061	"	"	"	"	"	
o-Xylene	"	0.081	0.0033	0.061	"	"	"	"	"	
Styrene	"	ND	0.0038	0.061	"	"	"	"	"	
Bromoforn	"	ND	0.017	0.061	"	"	"	"	"	
Isopropylbenzene	"	ND	0.0038	0.061	"	"	"	"	"	
Bromobenzene	"	ND	0.0042	0.061	"	"	"	"	"	
N-Propylbenzene	"	ND	0.0043	0.061	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	0.018	0.061	"	"	"	"	"	
2-Chlorotoluene	"	ND	0.0083	0.061	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	0.022	0.0065	0.061	"	"	"	"	"	J
n-Butylbenzene	"	ND	0.011	0.061	"	"	"	"	"	
1,2-Dibromo-3-Chloropropane	"	ND	0.10	0.31	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	0.0077	0.061	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	0.0077	0.061	"	"	"	"	"	
Hexachlorobutadiene	"	ND	0.0086	0.061	"	"	"	"	"	
Naphthalene	"	ND	0.0092	0.061	"	"	"	"	"	
Surrogate(s): Toluene-d8 (Surr)		102%		85 - 115 %	"					
Ethylbenzene-d10		107%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		101%		85 - 120 %	"					
Fluorobenzene (Surr)		104%		75 - 125 %	"					

TestAmerica Spokane

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Randee Decker, Project Manager





ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 12, 2010

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site, Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of 12 samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed as listed in the Tier III and IV Data Validation Summary Checklist (attached). Target analyte list (TAL) metals (EPA Methods 6010, 6020, and 7470), polychlorinated biphenyl (PCB; EPA Method 8082), diesel-range total petroleum hydrocarbons (Method NWTPH-Dx), and semivolatile organic compounds (SVOCs; EPA Method 8270) analyses were performed by Test America, Spokane Valley, Washington.

The samples were numbered:

G-MW11FP-090109	G-GA2-090209	G-GA4-090209
G-DW01-090109	G-GA3-090209	G-GA3D-090209
G-MW5-090109	G-GA3-090309	G-GA3D-090309
G-MW11FP-090109	G-GA2-090309	G-GA4-090209

See the attached Checklists and associated data results pages provided by Golder Associates for qualified sample results.

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho
LABORATORY: Test America		SDG: SSI0028
SAMPLES :	Collect:	MATRIX
G-GA2	9-02-09	WATER
G-GA4	↓	↓
G-DW01	9-03-09	↓
G-GA3	↓	↓
G-GA3D		
G-BMW5		
G-MW11FP	9-01-09	WATER/OTHER

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES 6010	ICP/ MS 6020	Hg/Se- 7074	CN	Anions	OTHER
1. Data Completeness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
2. Holding Times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
3. Calibration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
4. Blanks	① <input checked="" type="radio"/>	② <input checked="" type="radio"/>	<input type="radio"/>			
5. Lab Duplicate, Field Duplicate RPD	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>			
6. LCS, Blank Spike, MFS	③ <input checked="" type="radio"/>	④ <input checked="" type="radio"/>	<input type="radio"/>			
7. Matrix Spike, MSD	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>			
8. GFAA, MSA, Serial Dil.	⑤ <input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>			
9. Detection Limits, Other QC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
10. Data Verification, Overall Summary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① ^{TC} Mg in smpl. -01 and Na in Water samples detect in Method Blanks. Results changed to ND or J+(Na).
 ② TC detect in water smpl M.Blank, Al detect in water M.Blank
 ③ Al, Fe, Mg, K out of limit in ^{SOIL} water LCS/assoc. results qualif. J/UJ.
 ④ Cu recovery low in MS/MSD on SOIL-01. Results qual. J.
 ⑤ Ni, V, Cr out of limit. Smpl -01 qualif. (J).

Validated by:

Reviewed by:

[Signature]

Date:

Nov. 11, 2009

Date:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable:
YES NO

1. Date Package Completeness (Check if present)..... ☒ ☐

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ ICV/CCV Results
- ☒ Blank Results
- ☒ ICP Interference Check Results
- ☒ Spike Recovery Results
- ☒ Duplicate Results
- ☒ LCS Results
- ☒ Standard Addition Results
- ☒ ICP Serial Dilution

- ☒ Instrument Det. Limits
- ☒ ICP Correction Factors
- ☒ ICP Linear Ranges
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ ICP Raw Data
- ☒ GFAA Raw Data
- ☒ Hg Raw Data
- ☒ Cyanide Raw Data
- ☒ Other _____

☐ Acceptable
☒ Absent
☐ Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)..... ☒ ☐

- ☒ ICP/GFAA metals completed in <6 months from collection
- ☒ Mercury analyzed in <28 days from collection
- ☐ Cyanide completed in 14 days from collection

Comments/Qualified Results: 6010 WATER ✓ ; 6020 WATER ✓

Hg water ✓

SOIL: 6010 TotRecov. ✓

6020 " " ✓

Hg 7074 " ✓

3. Calibrations (Check all that apply)..... ☒ ☐

- ☐ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
- ☐ ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- ☐ ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- ☐ ICV/CCV %R 80-120% for Hg, results accepted
- ☒ CRDL Check Std %R 70 - 130, (50-150 SbPbTi)

- ☐ ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- ☐ ICV/CCV %R 85-115% for Cyanide, results acceptable
- ☐ ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- ☐ ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: 6010 ICV, CCV 9/16-18, ICV 10/01, 9/16 ✓

6020 ICV 9/16 ✓ CCV ✓ ; Hg ICV 9/16 ✓ CCV ✓ 9/17 ✓

ICS - 423/10 ✓, 485/9 ✓, 485/10 ✓, 315/10 ✓, 369/11 ✓

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

4. Blanks (Check all that apply).....

☐



- ☐ Detects reported in ICB/CCB list:
- ☐ Detects in preparation blanks, list:
- ☐ Detects in field blanks, list

Qualified as undetected (U) all sample concentrations $\leq 10X$ any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: 6010 (WATER) ^{9/16} Na detect $\times 10 = 8.2 \text{ mg/L}$

Se ^{9/17} detect $\times 10 = .035 \text{ mg/L}$ Be $\times 10 = .00058 (10/67)$

6020 - TL ^{10/61} $\times 10 = .048$ # 22/10A: Al $\times 10 = .146$

② 6010 (SOIL): MB 338/20-A: Na $\times 10 = 5.58 \text{ mg/Kgm}$

MB 413/5-A: Mg $\times 10 = 49.3 \text{ mg/Kgm}$

: TL $\times 10 = 46.1$

5. Duplicates (Check all that apply).....

☒

☐

- ☒ Duplicate RPD $\leq 20\%$ for waters ($\leq 35\%$ for soils) for results $> 5X$ CRDL
- ☐ Duplicate range is within $\pm \text{CRDL}$ ($\pm 2X$ CRDL for soils) for results $< 5X$ CRDL
- ☐ Field Duplicate ID

Comments/Qualified Results

Duplic. on Smp1-01 (Soil) ✓

Duplic. on Smp1-02 (SOIL) ✓

7. Laboratory Control Samples, Blank Spikes (Check all that apply)...

☐



- ☒ LCS %R 80-120%, [50-150% for Ag, Sb]
- ☒ LCS %R 50-79% or $> 120\%$, results $> \text{IDL}$ estimated (J)
- ☒ LCS %R 50-79% and results $< \text{IDL}$ estimated (UJ)
- ☐ LCS %R $< 50\%$ and all results rejected (R/UR)

Comments/Qualified Results:

LCS/LCS (WATER) 6010 ✓ 338/21A ✓ 338/23A ✓

413/6A ✓ 338/21A ✓

LCS/LCS (SOIL) 6010 413/8A - Al, Fe, Mg, K ↓. 220/6A ✓

" " (WATER) Hg 342/12A ✓

" " (SOIL) Hg 401/7A ✓

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

8. Spike Recovery (Check all that apply).....

☐



☒ Spike %R with 75-125%

☐ Spike %R 30-74%, >125%, results > IDL est. (J)

☒ Spike %R 30-74% results <IDL estimated (UJ)

☐ Spike %R <30%, results <IDL rejected (UR)

☐ Field blanks used for spike analysis

☐ Post digest spk reqd: %R 75-125%, except Ag

Comments/Qualified Results:

MS/MSD
MS on Smp1-01 (SOIL): Cu recov. ↓ (R)
MS on Smp1-02 (Water):

9. GFAA Performance, MSA, or Serial Dilutions.....

☐



☐ Duplicate injection RSD <20%

☐ Duplicate injection RSD >20%, results > CRDL estimated (J)

☐ Analytical spike %R 85-115%

☐ Analytical spike %R 40-85%, results > IDL estimated (J)

☐ Analytical spike %R 10-40%, results <IDL estimated (UJ)

☐ Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results:

(SOIL) Smp1-01: Ni, V, Cr exceed 10%.
(WATER) Smp1-02

10. Detection Limits, Other QC.....

☒

☐

Comments/Qualified Results:

11. Data Verification and Overall Assessment.....

☒

☐

Comments/Qualified Results:

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 16:33

Metals (ICP)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

SSI0028-01 (G-MW11FP-090109)

Other (L)

Sampled: 09/01/09 17:10

Aluminum	6010B TMP	ND <u>UT</u>	31	110	mg/Kg	1x	50413	09/17/09 10:34	09/17/09 23:44	*
X Antimony	"	ND	0.60	11	"	"	"	"	"	
X Arsenic	"	2.2	0.46	11	"	"	"	"	"	J
Calcium	"	43	5.3	190	"	"	"	"	"	J
Iron	"	120 <u>J</u>	1.6	35	"	"	"	"	"	*
Lead	"	15	0.42	5.3	"	"	"	"	"	
Magnesium	"	21 <u>2.3</u>	2.3	190 <u>u</u>	"	"	"	"	"	J
Manganese	"	1.6	0.028	3.5	"	"	"	"	"	J
Potassium	"	ND <u>UT</u>	56	580	"	"	"	"	"	*
X Selenium	"	ND	0.42	18	"	"	"	"	"	
X Silver	"	ND	0.16	3.5	"	"	"	"	"	
Sodium	"	ND	24	350	"	"	"	"	"	

SSI0028-01RE1 (G-MW11FP-090109)

Other (L)

Sampled: 09/01/09 17:10

X Cadmium	6010B TMP	ND	0.28	1.8	mg/Kg	1x	51220	10/01/09 10:41	10/01/09 18:38	
Beryllium	"	ND	0.0042	0.88	"	"	"	"	"	
Barium	"	2.4	0.053	1.8	"	"	"	"	"	
Thallium	"	1.8	0.49	18 <u>u</u>	"	"	"	"	"	J
Nickel	"	31 <u>J</u>	0.28	3.5	"	"	"	"	"	
Vanadium	"	26 <u>J</u>	0.11	1.8	"	"	"	"	"	
Copper	"	38 <u>J</u>	0.77	3.5	"	"	"	"	"	
Zinc	"	6.9	0.70	8.8	"	"	"	"	"	J
Chromium	"	13 <u>J</u>	0.17	4.6	"	"	"	"	"	
Cobalt	"	0.48	0.11	1.8	"	"	"	"	"	J

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 16:33

Metals (ICP) Total Recoverable TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10028-02 (G-GA2-090209)		Water		Sampled: 09/02/09 12:15						
Calcium	6010B Total Recoverable	27	0.028	1.1	mg/L	1x	50338	09/16/09 13:45	09/17/09 00:58	
Iron	"	0.065	0.032	0.20	"	"	"	"	"	J
Magnesium	"	6.6	0.23	1.1	"	"	"	"	"	
Sodium	"	2.8 J+	0.18	2.0	"	"	"	"	"	J
Manganese	"	0.25	0.0017	0.020	"	"	"	"	"	
Potassium	"	2.3	0.41	3.3	"	"	"	"	09/17/09 12:23	J
SS10028-03 (G-GA4-090209)		Water		Sampled: 09/02/09 14:30						
Calcium	6010B Total Recoverable	34	0.028	1.1	mg/L	1x	50338	09/16/09 13:45	09/17/09 01:33	
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	9.9	0.23	1.1	"	"	"	"	"	
Sodium	"	2.8 J+	0.18	2.0	"	"	"	"	"	J
Manganese	"	0.18	0.0017	0.020	"	"	"	"	"	
Potassium	"	3.2	0.41	3.3	"	"	"	"	09/17/09 12:51	J
SS10028-04 (G-DW01-090209)		Water		Sampled: 09/02/09 18:50						
Calcium	6010B Total Recoverable	38	0.028	1.1	mg/L	1x	50338	09/16/09 13:45	09/17/09 01:41	
Iron	"	8.8	0.032	0.20	"	"	"	"	"	
Magnesium	"	11	0.23	1.1	"	"	"	"	"	
Sodium	"	2.4 J+	0.18	2.0	"	"	"	"	"	J
Manganese	"	0.22	0.0017	0.020	"	"	"	"	"	
Potassium	"	1.3	0.41	3.3	"	"	"	"	09/17/09 12:55	J
SS10028-05 (G-GA3-090309)		Water		Sampled: 09/03/09 09:40						
Calcium	6010B Total Recoverable	21	0.028	1.1	mg/L	1x	50338	09/16/09 13:45	09/17/09 01:47	
Iron	"	0.053	0.032	0.20	"	"	"	"	"	J
Magnesium	"	3.3	0.23	1.1	"	"	"	"	"	
Sodium	"	1.6 J	0.18	2.0	"	"	"	"	"	J
Manganese	"	0.44	0.0017	0.020	"	"	"	"	"	
Potassium	"	2.4	0.41	3.3	"	"	"	"	09/17/09 13:00	J

Handwritten signature and date: 11-10-09

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name:	Avery Landing	
18300 NE Union Hill Rd. Suite 200	Project Number:	073-93312-03	Report Created:
Redmond, WA 98077	Project Manager:	Doug Morell	10/28/09 16:33

Metals (ICP) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-06	(G-GA3D-090309)	Water		Sampled: 09/03/09 09:50						
Calcium	6010B Total Recoverable	21	0.028	1.1	mg/L	1x	50338	09/16/09 13:45	09/17/09 01:53	
Iron	"	0.050	0.032	0.20	"	"	"	"	"	
Magnesium	"	3.3	0.23	1.1	"	"	"	"	"	
Sodium	"	1.6	0.18	2.0	"	"	"	"	"	
Manganese	"	0.45	0.0017	0.020	"	"	"	"	"	
Potassium	"	2.5	0.41	3.3	"	"	"	"	09/17/09 13:04	
SSI0028-07	(G-MW5-090309)	Water		Sampled: 09/03/09 12:00						
Calcium	6010B Total Recoverable	24	0.028	1.1	mg/L	1x	50338	09/16/09 13:45	09/17/09 02:00	
Iron	"	10	0.032	0.20	"	"	"	"	"	
Magnesium	"	8.0	0.23	1.1	"	"	"	"	"	
Sodium	"	2.7	0.18	2.0	"	"	"	"	"	
Manganese	"	1.4	0.0017	0.020	"	"	"	"	"	
Potassium	"	1.6	0.41	3.3	"	"	"	"	09/17/09 13:09	

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 16:33

Metals (ICP/MS) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-02 (G-GA2-090209)		Water		Sampled: 09/02/09 12:15						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 18:57	
Barium	"	0.077	0.00027	0.0060	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Chromium	"	0.00071	0.00037	0.0020	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Cobalt	"	0.00070	0.00016	0.0020	"	"	"	"	"	J
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Copper	"	0.0026 11-13-09	0.00015	0.0050	"	"	"	"	"	J
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Lead	"	0.00018	0.00017	0.0020	"	"	"	"	"	J
Zinc	"	0.0027	0.0020	0.0070	"	"	"	"	"	J
Nickel	"	0.0024	0.00022	0.0020	"	"	"	"	"	
SSI0028-02RE1 (G-GA2-090209)		Water		Sampled: 09/02/09 12:15						
Aluminum	6020 Total Recoverable	0.099 u	0.0023	0.40	mg/L	5x	51212	09/16/09 13:15	09/30/09 19:50	J
SSI0028-03 (G-GA4-090209)		Water		Sampled: 09/02/09 14:30						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:35	
Barium	"	0.025	0.00027	0.0060	"	"	"	"	"	
Antimony	"	0.0028	0.00040	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Chromium	"	0.00062	0.00037	0.0020	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Cobalt	"	0.0013	0.00016	0.0020	"	"	"	"	"	J
Thallium	"	0.00015 u	0.000060	0.0040	"	"	"	"	"	J
Copper	"	0.0037	0.00015	0.0050	"	"	"	"	"	J
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Zinc	"	0.0031	0.0020	0.0070	"	"	"	"	"	J
Nickel	"	0.0027	0.00022	0.0020	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/28/09 16:33
Redmond, WA 98077	Project Manager: Doug Morell	

Metals (ICP/MS) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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SSI0028-03RE1 (G-GA4-090209)

Water

Sampled: 09/02/09 14:30

Aluminum	6020 Total Recoverable	0.071	0.0023	0.40	mg/L	5x	51212	09/16/09 13:15	09/30/09 20:26	J, B
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SSI0028-04 (G-DW01-090209)

Water

Sampled: 09/02/09 18:50

Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:39	
Barium	"	0.019	0.00027	0.0060	"	"	"	"	"	
Antimony	"	0.0018	0.00040	0.0020	"	"	"	"	"	J
Beryllium	"	ND	0.00036	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Selenium	"	0.0010	0.00034	0.0020	"	"	"	"	"	J
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Thallium	"	0.00085	0.000060	0.0040	"	"	"	"	"	J, B
Copper	"	0.0020	0.00015	0.0050	"	"	"	"	"	J
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Lead	"	0.00030	0.00017	0.0020	"	"	"	"	"	J
Zinc	"	0.24	0.0020	0.0020	"	"	"	"	"	
Nickel	"	0.0014	0.00022	0.0020	"	"	"	"	"	J

SSI0028-04RE1 (G-DW01-090209)

Water

Sampled: 09/02/09 18:50

Aluminum	6020 Total Recoverable	0.061	0.0023	0.40	mg/L	5x	51212	09/16/09 13:15	09/30/09 20:30	J, B
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SSI0028-05 (G-GA3-090309)

Water

Sampled: 09/03/09 09:40

Arsenic	6020 Total Recoverable	0.00091	0.00024	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:43	J
Barium	"	0.038	0.00027	0.0060	"	"	"	"	"	
Antimony	"	0.0015	0.00040	0.0020	"	"	"	"	"	J
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Chromium	"	0.00038	0.00037	0.0020	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Cobalt	"	0.00038	0.00016	0.0020	"	"	"	"	"	J
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Copper	"	0.0016	0.00015	0.0050	"	"	"	"	"	J
Vanadium	"	0.00075	0.00023	0.0020	"	"	"	"	"	J
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 16:33

Metals (ICP/MS) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-05 (G-GA3-090309)		Water		Sampled: 09/03/09 09:40						
Zinc	6020 Total Recoverable	0.0025	0.0020	0.0070	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:43	J
Nickel	"	0.0024	0.0022	0.0020	"	"	"	"	"	
SSI0028-05RE1 (G-GA3-090309)		Water		Sampled: 09/03/09 09:40						
Aluminum	6020 Total Recoverable	0.0070	0.0023	0.40	u mg/L	5x	51212	09/16/09 13:15	09/30/09 20:33	JR
SSI0028-06 (G-GA3D-090309)		Water		Sampled: 09/03/09 09:50						
Arsenic	6020 Total Recoverable	0.00072	0.00024	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:46	J
Barium	"	0.038	0.00027	0.0060	"	"	"	"	"	
Antimony	"	0.0012	0.00040	0.0020	"	"	"	"	"	J
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Cobalt	"	0.00036	0.00016	0.0020	"	"	"	"	"	J
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Copper	"	0.0017	0.00015	0.0050	"	"	"	"	"	J
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Zinc	"	0.0023	0.0020	0.0070	"	"	"	"	"	J
Nickel	"	0.0024	0.0022	0.0020	"	"	"	"	"	
SSI0028-06RE1 (G-GA3D-090309)		Water		Sampled: 09/03/09 09:50						
Aluminum	6020 Total Recoverable	0.0081	0.0023	0.40	u mg/L	5x	51212	09/16/09 13:15	09/30/09 20:37	JR
SSI0028-07 (G-MW5-090309)		Water		Sampled: 09/03/09 12:00						
Arsenic	6020 Total Recoverable	0.010	0.00024	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:50	
Barium	"	0.055	0.00027	0.0060	"	"	"	"	"	
Antimony	"	0.0015	0.00040	0.0020	"	"	"	"	"	J
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Chromium	"	0.0043	0.00037	0.0020	"	"	"	"	"	
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 16:33

Metals (ICP/MS) Total Recoverable TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-07 (G-MW5-090309)		Water		Sampled: 09/03/09 12:00						
Cobalt	6020 Total Recoverable	0.0032	0.00016	0.0020	mg/L	5x	50336	09/16/09 13:15	09/16/09 19:50	
Thallium	"	0.00000	0.00000	0.0040	"	"	"	"	"	J-B
Copper	"	0.018	0.00015	0.0050	"	"	"	"	"	
Vanadium	"	0.0057	0.00023	0.0020	"	"	"	"	"	
Lead	"	0.012	0.00017	0.0020	"	"	"	"	"	
Zinc	"	0.028	0.0020	0.0070	"	"	"	"	"	
Nickel	"	0.0057	0.00022	0.0020	"	"	"	"	"	
SSI0028-07RE1 (G-MW5-090309)		Water		Sampled: 09/03/09 12:00						
Aluminum	6020 Total Recoverable	3.7	0.0023	0.40	mg/L	5x	51212	09/16/09 13:15	09/30/09 20:41	B

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 16:33

Mercury (CVAA) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-01 (G-MW11FP-090109)		Other (L)						Sampled: 09/01/09 17:10		
Mercury	7471A	ND	0.0055	0.018	mg/Kg	1x	50401	09/17/09 09:56	09/17/09 12:58	
SSI0028-02 (G-GA2-090209)		Water						Sampled: 09/02/09 12:15		
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50342	09/16/09 14:15	09/16/09 16:32	
SSI0028-03 (G-GA4-090209)		Water						Sampled: 09/02/09 14:30		
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50342	09/16/09 14:15	09/16/09 16:15	
SSI0028-04 (G-DW01-090209)		Water						Sampled: 09/02/09 18:50		
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50342	09/16/09 14:15	09/16/09 16:36	
SSI0028-05 (G-GA3-090309)		Water						Sampled: 09/03/09 09:40		
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50342	09/16/09 14:15	09/16/09 16:41	
SSI0028-06 (G-GA3D-090309)		Water						Sampled: 09/03/09 09:50		
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50342	09/16/09 14:15	09/16/09 16:45	
SSI0028-07 (G-MW5-090309)		Water						Sampled: 09/03/09 12:00		
Mercury	7470A	0.000073	0.000041	0.00020	mg/L	1x	50342	09/16/09 14:15	09/16/09 16:49	J

TestAmerica Spokane

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Randee Decker, Project Manager



ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: #SSI0028	
SAMPLES	Collect:	MATRIX	
G-GA2	9-02-09	WATER	
G-GA4			
G-DW01			
G-GA3			
G-GA3D			
G-MW5			

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA	BNA	Pest / PCB	TPH-Dx	PAH- SIM	OTHER	OTHER
1. Data Completeness		O	O	O	O		
2. Preservation, Holding Times		O	O	O	O		
3. GC/MS Tune, Inst. Performance		O	O	O	O		
4. Calibrations ①		O	X	O	O		
5. Surrogates		O	O	O	O		
6. Internal Standards		O	O	O	O		
7. Lab Blanks, Field Blanks ②		O	O	O	X		
8. Lab Duplicates, Field Duplicates		O	O	O	O		
9. LCS, Blank Spike, MS/MSD		O	O	O	O		
10. Compound Identification, TICs		O	O	O	O		
11. Result Verification, D.Limits		O	O	O	O		
12. Overall Summary		O	O	O	O		

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or U)].

M = Data qualified due to major problems [typically more than 50% qualified (J/U)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Select Anachlors out of limit for %RSD in CCAL. Assoc. results on 10/19 qualified 'UJ'.

② Select contaminants in PAN method blank qualify assoc. results as ND (U) for 1-methylnaphthalen, phenanthrene and pyrene.

Validated by:

Reviewed by:

Date: Nov. 10, 2009

Date:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable:

YES NO

1. Date Package Completeness (Check if present)..... ☐ ☐

☐ Case narrative
☐ Chain of Custody
☐ Sample Results
☐ Detection Limits
☐ GC/MS Tuning
☐ Initial Calibration
☐ Continuing Calib.

☐ Blank Results
☐ Surrogate Results
☐ Internal Standards
☐ MS/MSD, LCS Results
☐ Preparation Logs
☐ Analysis Run Logs
☐ Raw Data
☐ Other

☐ Acceptable
☒ Absent
☐ Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)..... ☒ ☐

☒ Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection

☒ BNA samples extracted within 7 days (14 day soil) of collection

☐ BNA extracts analyzed within 40 days of collection

☒ Pest/PCBs samples extracted within 7 days (14 day soil) of collection

☐ Pest/PCBs extracts analyzed within 40 days of collection

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results: _____

PCBs ✓ < 7 Day
PAHs ✓ < 7 Day
NWTPH-Dx < 14 Day ✓
SVOA ✓ < 14 Day

3. GC Instrument Tune, Performance Check ☐ ☐

☐ GC/MS Tuning performed

☐ GC/MS Tuning within control limits

☐ GC/MS Tuning out of control limits, (qualify R/UR)

☐ Res Chk Mix, MidPoint AB <60%, (J for detects, UR other)

☐ PEM resolution <90% adj pks, (J for detects, UR other)

☐ DDT, Endrin breakdown >20%, (J for DDD, DDT, Endrin,

Endrin Aldehyde, Endrin Ketone, or NJ/R)

☐ Res Check Mix, MidPoint AB, TCMX, DCBP within RT windows from ICAL AB mixture (Fix or R/UR)

Comments/Qualified Results: _____

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

4. Initial & Continuing Calibration (Check all that apply)..... ☐



GC/MS Data: ☐ ICal RRFs > 0.05 all cmpnds (If no, J/UR), [>0.01 for Poor Performers] VOA, SVOA
☐ ICal RSD of RRF < 30% all cmpnds (If no, J detects) [$<50\%$ for Poor Performers] VOA
☐ ICal RSD of RRF < 20.5% all cmpnds (If no, J detects) [$<50\%$ or $*30\%$ for Poor Performers] SVOA

Note: *Applies to 2,4-DNT, 2-Nitrophenol, and 2,4-DMP only [SVOA].

☐ Continue Cal. $\pm 30\%$ Diff of RRF (If no, J/UJ) [$\pm 50\%$ Diff, Poor Performers] VOA, SVOA

☐ Continue Cal. %D < 25% all cmpnds (If no, J/UJ), VOA, SVOA

Pesticide/PCB: ☐ RSD < 10% for performance checks (If no J detects)

☐ Stnds analyzed prior to analysis, & at proper frequency

☐ Continuing Cal. % Diff. < 15% for quant. (< 20% for confirm column)

PCB #50247 ^{3 RSD} VOA recovery ↑ on A-1016, A-1260. No Qual.
 (X) #52277 CCA ↓ for A-1221, -1232, -1242, -1248, -1254, assoc. results qualify (J/UJ).

5. Surrogates (Check all that apply)..... ☒

☒ Surrogates analyzed

☒ Recoveries within Method Control (lab) limits (VOA: 80 – 120%, SVOA: Lab Established, PEST: 30-150%)

☐ Recoveries above Method Control limits (J detects only)

☐ Recoveries below Method Control limits but > 20% (J/UJ)

☐ Recoveries below 20%, 10% for PEST (J/UR for VOA, J/ UJ or UR for SVOA, J/UR for PEST)

Comments/Qualified Results

NWTPH-Dx Batch #0043, 0077 ✓

SVOA Batch 50178 ✓

PAH-SIM Batch 49936 ✓

PCBs Batch 50176, 52320 ✓

6. Internal Standards Performance..... ☐

☐ Internal standards added to all QC and samples

☐ Internal standards areas within Control Limits* [$\pm 40\%$ VOA, $\pm 50\%$ SVOA]*

*Associated with 12 Hour CCV Std.

☐ Internal standards out of Control limits but > 10% (J/UJ)

☐ Internal standards zero or < 10% of Control limits (J/UR)

☐ Internal standards RTs within ± 20 sec window (If no, J/UJ)

Comments/Qualified Results:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

7. Laboratory Blanks, Field Blanks (Check all that apply).....



- ☐ Method Blanks, Prep. Blanks analyzed after Cal Strds and every 12 hours
☐ Method Blank Common Lab Contaminants, list: MeCl₂, Cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart
☐ Other Contaminants: Qualify results (< 5X RL) according to Chart below.
☐ Instrument blanks after all high level samples, All cmpnds must be <RL

Comments/Qualified Results:

Examples:

MDL	BLANK		SAMPLE		Q
	Result	PQL	Result	Applied	
0.3	0.45	1.0	0.8	1.0 U	
0.3	0.99	1.0	1.8	1.8 J	
0.3	1.5	1.0	1.1	1.5 U	
0.3	1.5	1.0	1.8	1.8 J	
0.3	0	1.0	0.85	0.85 J	
0.3	0	1.0	1.8	1.8	

TPH-D_x #0043 9/13 ND's ✓

#0077 9/11 ND's ✓

#0094 9/16 ND's ✓

PAHs - #50190 9/14 ✓

(X) in method blank → #50120 - 1-meth Naph, Phenanth, Pyrene
 *10 results = .0163, .0319, .0379.

PCBs - #50176 9/15 ✓, #52320 10/19 ✓

8. Duplicate, Field Duplicates (Check all that apply).....



- ☐ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
☐ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
☐ Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results

TPH-D_x #0043 rem-assoc. ✓ #0077 MS/MSD ✓

9. MS/MSD, Lab Control Samples, Blank Spikes (Check all that apply)....



- ☐ LCS %R 80-120%
☐ LCS %R 50-79% or >120%, results >IDL estimated (J)
☐ LCS %R 50-79% and results <IDL estimated (UJ)
☐ LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results:

TPH-D_x #0043 LCS 75% ✓, MS rem-assoc. ✓

#0077 BS1/BSD ✓, #0094 78% ✓

PAHs - #50190 9/14 LCS ✓, #50120 LCS ✓

PCBs - #50176 9/15 A-1016 #A-1260 ✓, #52320 10/19 ✓

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

10. Compound Identification, TICs..... ☒ ☐

Comments/Qualified Results: _____

11. Result Verification, Detection Limits ☒ ☐

☐ All results supported in raw data

☐ Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: _____

12. Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 16:33

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10028-05 (G-GA3-090309)		Water		Sampled: 09/03/09 09:40						
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52320	09/09/09 17:01	10/19/09 19:21	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

Surrogate(s): Tetrachloro-m-xylene
DCB Decachlorobiphenyl

66% 60 - 150 %
64% 40 - 135 %

SS10028-06 (G-GA3D-090309)		Water		Sampled: 09/03/09 09:50						
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52320	09/09/09 17:01	10/19/09 19:37	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

Surrogate(s): Tetrachloro-m-xylene
DCB Decachlorobiphenyl

65% 60 - 150 %
52% 40 - 135 %

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 16:33

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-01 (G-MW11FP-090109)		Other (L)					Sampled: 09/01/09 17:10			
PCB-1016	8082 STD	ND	0.14	0.43	mg/Kg	1x	50176	09/14/09 11:14	09/15/09 12:18	
PCB-1221	"	ND	0.34	0.43	"	"	"	"	"	
PCB-1232	"	ND	0.30	0.43	"	"	"	"	"	
PCB-1242	"	ND	0.089	0.43	"	"	"	"	"	
PCB-1248	"	ND	0.055	0.43	"	"	"	"	"	
PCB-1254	"	ND	0.089	0.43	"	"	"	"	"	
PCB-1260	"	0.37	0.13	0.43	"	"	"	"	"	J, p

Surrogate(s): Tetrachloro-m-xylene
DCB Decachlorobiphenyl

87% 45 - 155 %
110% 60 - 125 %

SSI0028-02 (G-GA2-090209)		Water					Sampled: 09/02/09 12:15			
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52320	09/09/09 17:01	10/19/09 18:50	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

Surrogate(s): Tetrachloro-m-xylene
DCB Decachlorobiphenyl

63% 60 - 150 %
67% 40 - 135 %

SSI0028-03 (G-GA4-090209)		Water					Sampled: 09/02/09 14:30			
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52320	09/09/09 17:01	10/19/09 19:06	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

Surrogate(s): Tetrachloro-m-xylene
DCB Decachlorobiphenyl

64% 60 - 150 %
73% 40 - 135 %

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 16:33

Semivolatile Compounds by Gas Chromatography/Mass

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10028-01 (G-MW11FP-090109)		Other (L)		Sampled: 09/01/09 17:10						
Naphthalene	8270C PAH	ND	1700	16000	ug/Kg	10x	50178	09/14/09 11:17	09/15/09 00:32	
2-Methylnaphthalene	"	16000	1800	16000	"	"	"	"	"	J
1-Methylnaphthalene	"	52000	1800	24000	"	"	"	"	"	
Acenaphthylene	"	ND	1300	16000	"	"	"	"	"	
Acenaphthene	"	42000	1300	16000	"	"	"	"	"	
Fluorene	"	68000	950	16000	"	"	"	"	"	
Phenanthrene	"	140000	1700	16000	"	"	"	"	"	
Anthracene	"	26000	1100	16000	"	"	"	"	"	
Fluoranthene	"	69000	950	16000	"	"	"	"	"	
Pyrene	"	110000	1100	16000	"	"	"	"	"	
Benzo[a]anthracene	"	40000	1300	20000	"	"	"	"	"	
Chrysene	"	71000	1100	20000	"	"	"	"	"	
Benzo[b]fluoranthene	"	20000	3300	16000	"	"	"	"	"	
Benzo[k]fluoranthene	"	3000	1000	20000	"	"	"	"	"	J
Benzo[a]pyrene	"	25000	1700	24000	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	4700	3300	32000	"	"	"	"	"	J
Dibenz[a,h]anthracene	"	ND	1700	32000	"	"	"	"	"	
Benzo[g,h,i]perylene	"	6700	1200	20000	"	"	"	"	"	J
Surrogate(s): Nitrobenzene-d5			87%		38 - 141 %	"			"	
2-Fluorobiphenyl			74%		42 - 140 %	"			"	
Terphenyl-d14			78%		42 - 151 %	"			"	



Golder Associates, Inc.	Project Name:	Avery Landing	
18300 NE Union Hill Rd. Suite 200	Project Number:	073-93312-03	Report Created:
Redmond, WA 98077	Project Manager:	Doug Morell	10/28/09 16:33

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-02	(G-GA2-090209)	Water		Sampled: 09/02/09 12:15						
Naphthalene	8270C STD	0.0062	0.0034	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 00:23	
2-Methylnaphthalene	"	0.0037	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0025	0.0011	0.0094	u	"	"	"	"	
Acenaphthylene	"	ND	0.0010	0.0094	"	"	"	"	"	
Acenaphthene	"	0.0029	0.00094	0.0094	"	"	"	"	"	
Fluorene	"	0.0034	0.0011	0.0094	"	"	"	"	"	
Phenanthrene	"	0.0078	0.0010	0.0094	u	"	"	"	"	
Anthracene	"	0.0021	0.00075	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0032	0.0015	0.0094	"	"	"	"	"	
Pyrene	"	0.0029	0.0016	0.0094	u	"	"	"	"	
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		88%		40 - 110 %	"				"	
2-Fluorobiphenyl		85%		50 - 110 %	"				"	
Terphenyl-d14		103%		50 - 135 %	"				"	

SI10028-03	(G-GA4-090209)	Water		Sampled: 09/02/09 14:30						
Naphthalene	8270C STD	0.0074	0.0034	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 00:42	J
2-Methylnaphthalene	"	0.0048	0.0028	0.012	"	"	"	"	"	J
1-Methylnaphthalene	"	0.0023	0.0011	0.0094	u	"	"	"	"	J
Acenaphthylene	"	0.0016	0.0010	0.0094	"	"	"	"	"	J
Acenaphthene	"	ND	0.00094	0.0094	"	"	"	"	"	J
Fluorene	"	0.0020	0.0011	0.0094	"	"	"	"	"	J
Phenanthrene	"	0.0043	0.0010	0.0094	u	"	"	"	"	J
Anthracene	"	0.00083	0.00075	0.0094	"	"	"	"	"	J
Fluoranthene	"	ND	0.0015	0.0094	"	"	"	"	"	J
Pyrene	"	0.0020	0.0016	0.0094	u	"	"	"	"	J
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	J
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	J
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	J
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	J
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	J

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 16:33

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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SSI0028-03 (G-GA4-090209)

Water

Sampled: 09/02/09 14:30

Dibenz(a,h)anthracene	8270C STD	ND	0.0017	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 00:42	
Benzo(g,h,i)perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		94%			40 - 110 %	"	"	"	"	
2-Fluorobiphenyl		86%			50 - 110 %	"	"	"	"	
Terphenyl-d14		99%			50 - 135 %	"	"	"	"	

SSI0028-04 (G-DW01-090209)

Water

Sampled: 09/02/09 18:50

Naphthalene	8270C STD	ND	0.0034	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 01:02	
2-Methylnaphthalene	"	ND	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0016	0.0011	0.0094	"	"	"	"	"	J-B
Acenaphthylene	"	ND	0.0010	0.0094	"	"	"	"	"	
Acenaphthene	"	0.0011	0.00094	0.0094	"	"	"	"	"	J
Fluorene	"	0.0012	0.0011	0.0094	"	"	"	"	"	J
Phenanthrene	"	0.0020	0.0010	0.0094	"	"	"	"	"	J-B
Anthracene	"	0.0016	0.00075	0.0094	"	"	"	"	"	J
Fluoranthene	"	ND	0.0015	0.0094	"	"	"	"	"	
Pyrene	"	ND	0.0016	0.0094	"	"	"	"	"	
Benzo(a)anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Benzo(b)fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Benzo(k)fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Benzo(a)pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz(a,h)anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo(g,h,i)perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		95%			40 - 110 %	"	"	"	"	
2-Fluorobiphenyl		83%			50 - 110 %	"	"	"	"	
Terphenyl-d14		98%			50 - 135 %	"	"	"	"	

SSI0028-05 (G-GA3-090309)

Water

Sampled: 09/03/09 09:40

Naphthalene	8270C STD	0.040	0.0034	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 01:21	
2-Methylnaphthalene	"	0.020	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.021	0.0011	0.0094	"	"	"	"	"	J
Acenaphthylene	"	0.0050	0.0010	0.0094	"	"	"	"	"	
Acenaphthene	"	0.025	0.00094	0.0094	"	"	"	"	"	
Fluorene	"	0.019	0.0011	0.0094	"	"	"	"	"	
Phenanthrene	"	0.020	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	ND	0.00075	0.0094	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 16:33

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-05 (G-CA3-090309)		Water		Sampled: 09/03/09 09:40						
Fluoranthene	8270C STD	0.0087	0.0015	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 01:21	J
Pyrene	"	0.0097	0.0016	0.0094	"	"	"	"	"	"
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	"
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	"
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	"
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	"
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	"
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	"
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	"
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	"
Surrogate(s): Nitrobenzene-d5		79%			40 - 110 %	"			"	
2-Fluorobiphenyl		89%			50 - 110 %	"			"	
Terphenyl-d14		104%			50 - 135 %	"			"	

SSI0028-06 (G-CA3D-090309)		Water		Sampled: 09/03/09 09:50						
Naphthalene	8270C STD	0.038	0.0034	0.0094	ug/L	1x	49936	09/09/09 16:54	09/12/09 01:41	
2-Methylnaphthalene	"	0.019	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.020	0.0011	0.0094	"	"	"	"	"	
Acenaphthylene	"	0.0048	0.0010	0.0094	"	"	"	"	"	J
Acenaphthene	"	0.025	0.00094	0.0094	"	"	"	"	"	
Fluorene	"	0.017	0.0011	0.0094	"	"	"	"	"	
Phenanthrene	"	0.019	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	ND	0.00075	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0049	0.0013	0.0094	"	"	"	"	"	J
Pyrene	"	0.0041	0.0016	0.0094	"	"	"	"	"	J
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		67%			40 - 110 %	"			"	
2-Fluorobiphenyl		80%			50 - 110 %	"			"	
Terphenyl-d14		105%			50 - 135 %	"			"	

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 16:33

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0028-07 (G-MW5-090309)		Water		Sampled: 09/03/09 12:00						
Naphthalene	8270C STD	0.22	0.0034	0.0095	ug/L	1x	49936	09/09/09 16:54	09/12/09 02:00	
2-Methylnaphthalene	"	0.094	0.0029	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	1.1	0.0011	0.0095	"	"	"	"	"	
Acenaphthylene	"	0.081	0.0010	0.0095	"	"	"	"	"	
Acenaphthene	"	0.50	0.00095	0.0095	"	"	"	"	"	
Fluorene	"	0.47	0.0011	0.0095	"	"	"	"	"	
Phenanthrene	"	0.14	0.0010	0.0095	"	"	"	"	"	
Anthracene	"	0.088	0.00076	0.0095	"	"	"	"	"	
Fluoranthene	"	0.023	0.0015	0.0095	"	"	"	"	"	
Pyrene	"	0.064	0.0016	0.0095	"	"	"	"	"	
Benzo[a]anthracene	"	0.0081	0.0023	0.0095	"	"	"	"	"	
Chrysene	"	0.011	0.0020	0.0095	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0025	0.0095	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.0023	0.0095	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0095	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0095	"	"	"	"	"	
Benzo[g,h,i]perylene	"	0.0021	0.0019	0.0095	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		92%				40 - 110 %	"		"	
2-Fluorobiphenyl		64%				50 - 110 %	"		"	
Terphenyl-d14		91%				50 - 135 %	"		"	



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 16:33

Semivolatile Petroleum Products by NWTPII-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10028-01 (G-MW11FP-090109)		Other (L)		Sampled: 09/01/09 17:10						
Diesel Range Hydrocarbons	NWTPII-Dx	202000	---	4000	mg/kg wet	1x	9090043	09/08/09 18:28	09/13/09 17:47	
Heavy Oil Range Hydrocarbons	"	321000	---	10000	"	"	"	"	"	
Surrogate(s): 2-FBP		111%			50 - 150 %	"			"	
p-Terphenyl-d14		108%			50 - 150 %	"			"	
SS10028-02 (G-GA2-090209)		Water		Sampled: 09/02/09 12:15						
Diesel Range Hydrocarbons	NWTPII-Dx	ND	---	0.243	mg/l	1x	9090077	09/11/09 08:00	09/13/09 19:47	
Heavy Oil Range Hydrocarbons	"	ND	---	0.485	"	"	"	"	"	C
Surrogate(s): 2-FBP		79.0%			50 - 150 %	"			"	
p-Terphenyl-d14		94.6%			50 - 150 %	"			"	
SS10028-03 (G-GA4-090209)		Water		Sampled: 09/02/09 14:30						
Diesel Range Hydrocarbons	NWTPII-Dx	ND	---	0.243	mg/l	1x	9090077	09/11/09 08:00	09/13/09 20:12	
Heavy Oil Range Hydrocarbons	"	ND	---	0.485	"	"	"	"	"	C
Surrogate(s): 2-FBP		79.7%			50 - 150 %	"			"	
p-Terphenyl-d14		93.7%			50 - 150 %	"			"	
SS10028-04 (G-DW01-090209)		Water		Sampled: 09/02/09 18:50						
Diesel Range Hydrocarbons	NWTPII-Dx	ND	---	0.243	mg/l	1x	9090077	09/11/09 08:00	09/13/09 20:36	
Heavy Oil Range Hydrocarbons	"	ND	---	0.485	"	"	"	"	"	C
Surrogate(s): 2-FBP		78.8%			50 - 150 %	"			"	
p-Terphenyl-d14		93.4%			50 - 150 %	"			"	
SS10028-05 (G-GA3-090309)		Water		Sampled: 09/03/09 09:40						
Diesel Range Hydrocarbons	NWTPII-Dx	ND	---	0.243	mg/l	1x	9090077	09/11/09 08:00	09/13/09 21:00	
Heavy Oil Range Hydrocarbons	"	ND	---	0.485	"	"	"	"	"	C
Surrogate(s): 2-FBP		74.1%			50 - 150 %	"			"	
p-Terphenyl-d14		90.6%			50 - 150 %	"			"	
SS10028-06 (G-GA3D-090309)		Water		Sampled: 09/03/09 09:50						
Diesel Range Hydrocarbons	NWTPII-Dx	ND	---	0.250	mg/l	1x	9090077	09/11/09 08:00	09/13/09 21:24	
Heavy Oil Range Hydrocarbons	"	ND	---	0.500	"	"	"	"	"	C
Surrogate(s): 2-FBP		79.9%			50 - 150 %	"			"	
p-Terphenyl-d14		96.8%			50 - 150 %	"			"	

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/28/09 16:33
Redmond, WA 98077	Project Manager: Doug Morell	

Semivolatile Petroleum Products by NWTPH-Dx
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10028-07 (G-MWS-090309)										
		Water		Sampled: 09/03/09 12:00						
Diesel Range Hydrocarbons	NWTPH-Dx	0.484	----	0.312	mg/l	1x	9090094	09/15/09 07:58	09/16/09 23:44	
Heavy Oil Range Hydrocarbons	"	0.713	----	0.625	"	"	"	"	"	
Surrogate(s): 2-FBP		85.6%			50 - 150 %	"			"	
p-Terphenyl-d14		103%			50 - 150 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager





ecology and environment, inc.

International Specialists in the Environment

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MEMORANDUM

DATE: May 12, 2010

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site, Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of 38 samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed in accordance with the Tier III and IV Data Validation Summary Checklist (attached). Target analyte list (TAL) metals (EPA Methods 6010, 6020, and 7470), polychlorinated biphenyl (PCB; EPA Method 8082), diesel-range total petroleum hydrocarbons (Method NWTPH-Dx), and semivolatile organic compounds (SVOCs; EPA Method 8270-SIM) analyses were performed by Test America, Spokane Valley, Washington.

The samples were numbered:

G-HC1R-090409	G-EW3-090409	G-EW4-090409
G-EMW04-090409	G-GA1-090509	G-EMW05-090509
G-EMW06-090509	G-EB-090509	G-RS1SW-090609
G-RS2SW-090609	G-RS3SW-090609	G-RS3DSW-090609
G-RS4SW-090609	G-RS5SW-090609	G-RS6SW-090609
G-RS7SW-090609	G-RS8SW-090609	G-P101OFP-090409
G-RS5FP-090509	G-RS4FP-090509	G-RS3FP-090509
G-RS3AFP-090509	G-EMW06-090509	G-EB-090509
G-RS1SW-090609	G-RS2SW-090609	G-RS3SW-090609
G-RS3DSW-090609	G-RS4SW-090609	G-RS5SW-090609
G-RS6SW-090609	G-RS7SW-090609	G-RS8SW-090609
G-P101OFP-090409	G-RS5FP-090509	G-RS4FP-090509
G-RS3FP-090509	G-RS3AFP-090509	

See the attached Checklists and associated data results pages provided by Golder Associates for qualified sample results.

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: SSI0032	
SAMPLES	Collect	MATRIX	
G-P1010FP	09-04-09	LNAPL ↓ Total Fraction Metals ONLY ↓	
G-RS5FP	9-05-09		
G-RS4FP			
G-RS3FP			
G-RS3aFP			
G-HQR	G-GA1	G-RS4SW	Total Fraction Metals ONLY ↓
G-EW3	G-EB	5SW	
G-EW4	G-RS1SW	6SW	
G-EMW04	G-RS2SW	7SW	
G-EMW05	G-RS3SW	8SW	
G-EMW06	G-RS3DSW		

* Data package 16474 has Dissolv fraction for these samples.
DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES	ICP/ MS	Hg/ Se	CN	Anions	OTHER
	6010	6020	7074			
1. Data Completeness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
2. Holding Times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
3. Calibration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
4. Blanks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>			
5. Lab Duplicate, Field Duplicate RPD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
6. LCS, Blank Spike, MPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
7. Matrix Spike, MSD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
8. GFAA, MSA, Serial Dil.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
9. Detection Limits, Other QC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
10. Data Verification, Overall Summary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Mg & Ti detected in LNAPL assoc. samples.
Mg results qualified as non-detect 'U'.

Validated by:

Reviewed by:

Date: Nov 11, 2009

Date:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable:
YES NO

1. Date Package Completeness (Check if present).....

☒ ☐

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ ICP/CCV Results
- ☒ Blank Results
- ☒ ICP Interference Check Results
- ☒ Spike Recovery Results
- ☒ Duplicate Results
- ☒ LCS Results
- ☒ Standard Addition Results
- ☒ ICP Serial Dilution

- ☒ Instrument Det. Limits
- ☒ ICP Correction Factors
- ☒ ICP Linear Ranges
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ ICP Raw Data
- ☒ GFAA Raw Data
- ☒ Hg Raw Data
- ☒ Cyanide Raw Data
- ☐ Other

- ☒ Acceptable
- ☒ Absent
- ☐ Not required for data package requested.

Requested Lower MRL on 1-12-10.

Comments/Qualified Results:

ICS - 617/10 ✓ 992/9 ✓ 992/10 ✓ 621/11 ✓
6010 Water - for total fraction (AL, Na, Ca, Mn, K, Fe, #Mg.
6020 Water - for total fract. As, Cd, Pb, Sb, Cr, Ni, Ba, Co, Se,
Be, Cu, Ag, Ti, V, Zn. (AL) 6020 data reported. 1-14-2010
TMR

2. Holding Times (Check all that apply).....

☒ ☐

- ☐ ICP/GFAA metals completed in <6 months from collection
- ☐ Mercury analyzed in <28 days from collection
- ☐ Cyanide completed in 14 days from collection

Comments/Qualified Results:

See H. Time Summary attached.

3. Calibrations (Check all that apply).....

☒ ☐

- ☐ ICP/CCV %R for ICP/AA, 90%-110%, acceptable
- ☐ ICP/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- ☐ ICP/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- ☐ ICP/CCV %R 80-120% for Hg, results accepted
- ☒ CRDL Check Std %R 70 - 130, (50-150 SbPbTi)

- ☐ ICP/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- ☐ ICP/CCV %R 85-115% for Cyanide, results acceptable
- ☐ ICP/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- ☐ ICP/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

GOLD (WATER) 9/21 ✓ 9/25 ✓
GOZO (WATER) 9/21 ✓
Hg (WATER) 9/14 ✓

ORQL # 617/8 ✓ 992/8 ✓ 621/9 ✓

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

4. Blanks (Check all that apply).....



___ Detects reported in ICB/CCB list:

___ Detects in preparation blanks, list:

___ Detects in field blanks, list

Mg, TL

Qualified as undetected (U) all sample concentrations $\leq 10X$ any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: Hg (LNAPL) MB # 077-23 9/28 ✓, (WATER) MB # 191-23 9/14 ✓

⊗ 6010 (LNAPL) #922-13 9/25 Mg ($\times 10 = 55.4 \text{ mg/kg}$), TL ($\times 10 = 27.9$) detects.

(WATER) # 617-13 9/21 ✓

6020 (WATER) #621-27 9/21 ✓

5. Duplicates (Check all that apply).....



___ Duplicate RPD $\leq 20\%$ for waters ($\leq 35\%$ for soils) for results $> 5X$ CRDL

___ Duplicate range is within $\pm \text{CRDL}$ ($\pm 2X$ CRDL for soils) for results $< 5X$ CRDL

___ Field Duplicate ID

Comments/Qualified Results Hg on-22 ✓ (WATER), -05 (LNAPL) ✓ LCS/LCSD ✓

6010 (LNAPL) Na $> 35\%$ RPD on sample -05 Qual (J/U) ✓ LCS/LCSD ✓
(WATER) Smpl -22 ✓, MS/MSD ✓, LCS/LCSD ✓

6020 (WATER) Smpl -22 ✓, LCS/LCSD ✓, MS/MSD on-22 ✓

6. Laboratory Control Samples, Blank Spikes (Check all that apply)...



___ LCS %R 80-120%, [50-150% for Ag, Sb]

___ LCS %R 50-79% or $> 120\%$, results $> \text{IDL}$ estimated (J)

___ LCS %R 50-79% and results $< \text{IDL}$ estimated (UJ)

___ LCS %R $< 50\%$ and all results rejected (R/UR)

Comments/Qualified Results: Hg (WATER) LCS/LCSD (100/108%) ✓, (LNAPL) 96% ✓, MS/MSD on -05 ✓

6010 (LNAPL) - LCS (90-100%) ✓, (WATER) MS/MSD on-22 (90-105%) ✓
LCS/LCSD 9/21 (80-102%) ✓

6020 (WATER) : MS/MSD on-22 (95-115%) ✓, LCS (92-110%) ✓

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

7. Spike Recovery (Check all that apply)..... ☒ ☐

- ☒ Spike %R with 75-125%
☐ Spike %R 30-74%, >125%, results > IDL est. (J)
☐ Spike %R 30-74% results <IDL estimated (UJ)
☐ Spike %R <30%, results <IDL rejected (UR)
☐ Field blanks used for spike analysis
☐ Post digest spk reqd: %R 75-125%, except Ag

Comments/Qualified Results: See Section 6 for MS/MSD reviews.

8. GFAA Performance, MSA, or Serial Dilutions..... ☒ ☐

- ☐ Duplicate injection RSD <20%
☐ Duplicate injection RSD >20%, results > CRDL estimated (J)
☐ Analytical spike %R 85-115%
☐ Analytical spike %R 40-85%, results > IDL estimated (J)
☐ Analytical spike %R 10-40%, results <IDL estimated (UJ)
☐ Analytical spike %R <10%, results <IDL rejected (R)

Serial Dilutions:

Comments/Qualified Results: GOIO (WATER) #348-17 ✓ #348/20 ✓ 348/17 ✓

9. Detection Limits, Other QC..... ☒ ☐

Comments/Qualified Results: _____

10. Data Verification and Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

SS10032-02	(G-EW3-090409)	Water			Sampled: 09/04/09 11:20				
Arsenic	6020 Total Recoverable	0.037	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 09:37
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"
Lead	"	ND	0.00017	0.0020	"	"	"	"	"
Antimony	"	0.00095	0.00040	0.0020	"	"	"	"	J
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"
Nickel	"	0.0014	0.00022	0.0020	"	"	"	"	J
Barium	"	0.097	0.00027	0.0060	"	"	"	"	"
Cobalt	"	0.0011	0.00016	0.0020	"	"	"	"	J
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"
Copper	"	0.00083	0.00015	0.0050	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP/MS) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-03 (G-EW4-090409)		Water		Sampled: 09/04/09 13:20						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 09:42	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	0.00074	0.00040	0.0020	"	"	"	"	"	J
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.0012	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.023	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	0.00045	0.00016	0.0020	"	"	"	"	"	J
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00084	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	1.2	0.0020	0.0070	"	"	"	"	"	
SSI0032-04 (G-EMW04-090409)		Water		Sampled: 09/04/09 15:35						
Arsenic	6020 Total Recoverable	0.015	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 09:47	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	0.00062	0.00040	0.0020	"	"	"	"	"	J
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.0013	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.062	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	0.00060	0.00016	0.0020	"	"	"	"	"	J
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00081	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-06 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
Arsenic	6020 Total Recoverable	0.0063	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 09:53	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	0.00078	0.00040	0.0020	"	"	"	"	"	J
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.0020	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.094	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	0.0012	0.00016	0.0020	"	"	"	"	"	J
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.0013	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	

SSI0032-07 (G-EMW05-090509)		Water		Sampled: 09/05/09 11:25						
Arsenic	6020 Total Recoverable	0.052	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 09:58	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00085	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.057	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	0.00042	0.00016	0.0020	"	"	"	"	"	J
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00077	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	

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Rande Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16


Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-08 (G-EMW06-090509)		Water		Sampled: 09/05/09 13:25						
Arsenic	6020 Total Recoverable	0.023	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:03	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00073	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.045	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00064	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	

SSI0032-09 (G-EB-090509)		Water		Sampled: 09/05/09 14:00						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:08	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00037	0.00022	0.0020	"	"	"	"	"	J
Barium	"	ND	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00066	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-14 (G-RS1SW-090609)		Water		Sampled: 09/06/09 09:45						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:14	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	0.00046	0.00037	0.0020	"	"	"	"	"	J
Nickel	"	0.00053	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0079	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00075	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	0.00028	0.00023	0.0020	"	"	"	"	"	J
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	
SSI0032-15 (G-RS2SW-090609)		Water		Sampled: 09/06/09 10:45						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:19	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00052	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0081	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00090	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	



Golder Associates, Inc.
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10/28/09 11:16

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-16 (G-RS3SW-090609)		Water		Sampled: 09/06/09 12:00						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:35	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00046	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0072	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00074	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	
SSI0032-17 (G-RS3DSW-090609)		Water		Sampled: 09/06/09 11:40						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:40	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00043	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0077	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00075	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

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10/28/09 11:16

Metals (ICP/MS) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-19 (G-RS4SW-090609)		Water		Sampled: 09/06/09 13:30						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:45	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	0.00044	0.00037	0.0020	"	"	"	"	"	J
Nickel	"	0.00038	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0079	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00078	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	0.00014	0.000060	0.0040	"	"	"	"	"	J
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.00020	0.0070	"	"	"	"	"	
SSI0032-20 (G-RS5SW-090609)		Water		Sampled: 09/06/09 14:00						
Arsenic	6020 Total Recoverable	0.00052	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:51	J
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	ND	0.00037	0.0020	"	"	"	"	"	
Nickel	"	0.00058	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.013	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00080	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.00020	0.0070	"	"	"	"	"	

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Randee Decker

Randee Decker, Project Manager



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18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-21 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
Arsenic	6020 Total Recoverable	0.0011	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 10:56	J
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	0.00038	0.00037	0.0020	"	"	"	"	"	J
Nickel	"	0.00046	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0080	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00084	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	
SSI0032-22 (G-RS7SW-090609)		Water		Sampled: 09/06/09 15:20						
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 08:39	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	0.00042	0.00037	0.0020	"	"	"	"	"	J
Nickel	"	0.00047	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0076	0.00027	0.0060	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00076	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd, Suite 200	Project Number: 073-93312-03	10/28/09 11:16
Redmond, WA 98077	Project Manager: Doug Morell	

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-23 (G-RS8SW-090609)		Water						Sampled: 09/06/09 16:25		
Arsenic	6020 Total Recoverable	ND	0.00024	0.0020	mg/L	5x	50495	09/18/09 11:30	09/21/09 11:01	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	
Antimony	"	ND	0.00040	0.0020	"	"	"	"	"	
Chromium	"	0.00051	0.00037	0.0020	"	"	"	"	"	J
Nickel	"	0.00039	0.00022	0.0020	"	"	"	"	"	J
Barium	"	0.0072	0.00027	0.0050	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Copper	"	0.00077	0.00015	0.0050	"	"	"	"	"	J
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Vanadium	"	ND	0.00023	0.0020	"	"	"	"	"	
Zinc	"	ND	0.0020	0.0070	"	"	"	"	"	



Golder Associates, Inc.
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Project Number: **073-93312-03**
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10/28/09 11:16

Metals (ICP) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-01 (G-HC1R-090409)		Water		Sampled: 09/04/09 09:00						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:34	
Sodium	"	1.1	0.18	2.0	"	"	"	"	"	J
Calcium	"	12	0.028	1.1	"	"	"	"	"	
Manganese	"	0.0085	0.0017	0.020	"	"	"	"	"	J
Potassium	"	0.74	0.41	3.3	"	"	"	"	"	J
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	2.5	0.23	1.1	"	"	"	"	"	
SSI0032-02 (G-EW3-090409)		Water		Sampled: 09/04/09 11:20						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:40	
Sodium	"	2.4	0.18	2.0	"	"	"	"	"	
Calcium	"	61	0.028	1.1	"	"	"	"	"	
Manganese	"	3.8	0.0017	0.020	"	"	"	"	"	
Potassium	"	2.9	0.41	3.3	"	"	"	"	"	J
Iron	"	38	0.032	0.20	"	"	"	"	"	
Magnesium	"	8.7	0.23	1.1	"	"	"	"	"	
SSI0032-03 (G-EW4-090409)		Water		Sampled: 09/04/09 13:20						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:44	
Sodium	"	2.5	0.18	2.0	"	"	"	"	"	
Calcium	"	29	0.028	1.1	"	"	"	"	"	
Manganese	"	0.18	0.0017	0.020	"	"	"	"	"	
Potassium	"	0.90	0.41	3.3	"	"	"	"	"	J
Iron	"	23	0.032	0.20	"	"	"	"	"	
Magnesium	"	8.0	0.23	1.1	"	"	"	"	"	
SSI0032-04 (G-EMW04-090409)		Water		Sampled: 09/04/09 15:35						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:49	
Sodium	"	3.3	0.18	2.0	"	"	"	"	"	
Calcium	"	69	0.028	1.1	"	"	"	"	"	
Manganese	"	1.4	0.0017	0.020	"	"	"	"	"	
Potassium	"	3.2	0.41	3.3	"	"	"	"	"	J
Iron	"	20	0.032	0.20	"	"	"	"	"	
Magnesium	"	11	0.23	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-06 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:54	
Sodium	"	3.5	0.18	2.0	"	"	"	"	"	
Calcium	"	70	0.028	1.1	"	"	"	"	"	
Manganese	"	2.0	0.0017	0.020	"	"	"	"	"	
Potassium	"	3.4	0.41	3.3	"	"	"	"	"	
Iron	"	7.8	0.032	0.20	"	"	"	"	"	
Magnesium	"	11	0.23	1.1	"	"	"	"	"	
SSI0032-07 (G-EMW05-090509)		Water		Sampled: 09/05/09 11:25						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:58	
Sodium	"	2.4	0.18	2.0	"	"	"	"	"	
Calcium	"	34	0.028	1.1	"	"	"	"	"	
Manganese	"	2.2	0.0017	0.020	"	"	"	"	"	
Potassium	"	1.5	0.41	3.3	"	"	"	"	"	J
Iron	"	19	0.032	0.20	"	"	"	"	"	
Magnesium	"	6.9	0.23	1.1	"	"	"	"	"	
SSI0032-08 (G-EMW06-090509)		Water		Sampled: 09/05/09 13:25						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:03	
Sodium	"	2.6	0.18	2.0	"	"	"	"	"	
Calcium	"	36	0.028	1.1	"	"	"	"	"	
Manganese	"	1.0	0.0017	0.020	"	"	"	"	"	
Potassium	"	1.4	0.41	3.3	"	"	"	"	"	J
Iron	"	12	0.032	0.20	"	"	"	"	"	
Magnesium	"	7.8	0.23	1.1	"	"	"	"	"	
SSI0032-09 (G-EB-090509)		Water		Sampled: 09/05/09 14:00						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:08	
Sodium	"	ND	0.18	2.0	"	"	"	"	"	
Calcium	"	ND	0.028	1.1	"	"	"	"	"	
Manganese	"	ND	0.0017	0.020	"	"	"	"	"	
Potassium	"	ND	0.41	3.3	"	"	"	"	"	
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	ND	0.23	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc. 18300 NE Union Hill Rd. Suite 200 Redmond, WA 98077	Project Name: Avery Landing Project Number: 073-93312-03 Project Manager: Doug Morell	Report Created: 10/28/09 11:16
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Metals (ICP) Total Recoverable TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-14 (G-RSISW-090609)		Water		Sampled: 09/06/09 09:45						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:12	
Sodium	"	1.1	0.18	2.0	"	"	"	"	"	J
Calcium	"	12	0.028	1.1	"	"	"	"	"	
Manganese	"	ND	0.0017	0.020	"	"	"	"	"	
Potassium	"	0.66	0.41	3.3	"	"	"	"	"	J
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	2.5	0.23	1.1	"	"	"	"	"	
SSI0032-15 (G-RS2SW-090609)		Water		Sampled: 09/06/09 10:45						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:18	
Sodium	"	1.1	0.18	2.0	"	"	"	"	"	J
Calcium	"	12	0.028	1.1	"	"	"	"	"	
Manganese	"	ND	0.0017	0.020	"	"	"	"	"	
Potassium	"	0.67	0.41	3.3	"	"	"	"	"	J
Iron	"	0.051	0.032	0.20	"	"	"	"	"	J
Magnesium	"	2.4	0.23	1.1	"	"	"	"	"	
SSI0032-16 (G-RS3SW-090609)		Water		Sampled: 09/06/09 12:00						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:32	
Sodium	"	1.0	0.18	2.0	"	"	"	"	"	J
Calcium	"	11	0.028	1.1	"	"	"	"	"	
Manganese	"	ND	0.0017	0.020	"	"	"	"	"	
Potassium	"	0.68	0.41	3.3	"	"	"	"	"	J
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	2.4	0.23	1.1	"	"	"	"	"	
SSI0032-17 (G-RS3DSW-090609)		Water		Sampled: 09/06/09 11:40						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:37	
Sodium	"	0.99	0.18	2.0	"	"	"	"	"	J
Calcium	"	11	0.028	1.1	"	"	"	"	"	
Manganese	"	ND	0.0017	0.020	"	"	"	"	"	
Potassium	"	0.64	0.41	3.3	"	"	"	"	"	J
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	2.3	0.23	1.1	"	"	"	"	"	

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL ^a	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-19 (G-RS4SW-090609)		Water		Sampled: 09/06/09 13:30						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:43	
Sodium	"	1.0	0.18	2.0	"	"	"	"	"	J
Calcium	"	11	0.028	1.1	"	"	"	"	"	
Manganese	"	0.011	0.0017	0.020	"	"	"	"	"	J
Potassium	"	0.66	0.41	3.3	"	"	"	"	"	J
Iron	"	0.041	0.032	0.20	"	"	"	"	"	J
Magnesium	"	2.3	0.23	1.1	"	"	"	"	"	
SSI0032-20 (G-RS5SW-090609)		Water		Sampled: 09/06/09 14:00						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:49	
Sodium	"	1.2	0.18	2.0	"	"	"	"	"	J
Calcium	"	15	0.028	1.1	"	"	"	"	"	
Manganese	"	0.16	0.0017	0.020	"	"	"	"	"	
Potassium	"	0.76	0.41	3.3	"	"	"	"	"	J
Iron	"	1.7	0.032	0.20	"	"	"	"	"	
Magnesium	"	3.0	0.23	1.1	"	"	"	"	"	
SSI0032-21 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 13:54	
Sodium	"	1.0	0.18	2.0	"	"	"	"	"	J
Calcium	"	11	0.028	1.1	"	"	"	"	"	
Manganese	"	0.011	0.0017	0.020	"	"	"	"	"	J
Potassium	"	0.68	0.41	3.3	"	"	"	"	"	J
Iron	"	0.068	0.032	0.20	"	"	"	"	"	J
Magnesium	"	2.3	0.23	1.1	"	"	"	"	"	
SSI0032-22 (G-RS7SW-090609)		Water		Sampled: 09/06/09 15:20						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 12:03	
Sodium	"	1.0	0.18	2.0	"	"	"	"	"	J
Calcium	"	11	0.028	1.1	"	"	"	"	"	
Manganese	"	0.0076	0.0017	0.020	"	"	"	"	"	J
Potassium	"	0.69	0.41	3.3	"	"	"	"	"	J
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	2.3	0.23	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Metals (ICP) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-23 (G-RS8SW-090609)		Water		Sampled: 09/06/09 16:25						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50495	09/18/09 11:30	09/21/09 14:00	
Sodium	"	1.0	0.18	2.0	"	"	"	"	"	J
Calcium	"	11	0.028	1.1	"	"	"	"	"	
Manganese	"	0.0019	0.0017	0.020	"	"	"	"	"	J
Potassium	"	0.68	0.41	3.3	"	"	"	"	"	J
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	2.3	0.23	1.1	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-01 (G-HC1R-090409)		Water		Sampled: 09/04/09 09:00						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:21	
SSI0032-02 (G-EW3-090409)		Water		Sampled: 09/04/09 11:20						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:33	
SSI0032-03 (G-EW4-090409)		Water		Sampled: 09/04/09 13:20						
Mercury	7470A	0.00012	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:37	J
SSI0032-04 (G-EMW04-090409)		Water		Sampled: 09/04/09 15:35						
Mercury	7470A	0.000074	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:42	J
SSI0032-05 (G-P101OFP-090409)		Other (L)		Sampled: 09/04/09 17:30						
Mercury	7471A	ND	0.011	0.036	mg/Kg	1x	50889	09/25/09 11:09	09/28/09 12:40	
SSI0032-06 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:46	
SSI0032-07 (G-EMW05-090509)		Water		Sampled: 09/05/09 11:25						
Mercury	7470A	0.000079	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:51	J
SSI0032-08 (G-EMW06-090509)		Water		Sampled: 09/05/09 13:25						
Mercury	7470A	0.00012	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:55	J
SSI0032-09 (G-EB-090509)		Water		Sampled: 09/05/09 14:00						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:59	
SSI0032-10 (G-RS5FP-090509)		Other (L)		Sampled: 09/05/09 15:00						
Mercury	7471A	0.034	0.012	0.038	mg/Kg	1x	50889	09/25/09 11:09	09/28/09 12:57	J
SSI0032-11 (G-RS4FP-090509)		Other (L)		Sampled: 09/05/09 16:08						
Mercury	7471A	0.034	0.012	0.038	mg/Kg	1x	50889	09/25/09 11:09	09/28/09 13:01	J

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-12 (G-RS3FP-090509)		Other (L)		Sampled: 09/05/09 16:35						
Mercury	7471A	0.019	0.012	0.038	mg/Kg	1x	50889	09/25/09 11:09	09/28/09 13:06	J
SSI0032-13 (G-RS3aFP-090509)		Other (L)		Sampled: 09/05/09 17:00						
Mercury	7471A	0.013	0.013	0.040	mg/Kg	1x	50889	09/25/09 11:09	09/28/09 13:10	J
SSI0032-14 (G-RS1SW-090609)		Water		Sampled: 09/06/09 09:45						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:03	
SSI0032-15 (G-RS2SW-090609)		Water		Sampled: 09/06/09 10:45						
Mercury	7470A	0.00012	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:07	J
SSI0032-16 (G-RS3SW-090609)		Water		Sampled: 09/06/09 12:00						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:12	
SSI0032-17 (G-RS3DSW-090609)		Water		Sampled: 09/06/09 11:40						
Mercury	7470A	0.000090	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:24	J
SSI0032-19 (G-RS4SW-090609)		Water		Sampled: 09/06/09 13:30						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:29	
SSI0032-20 (G-RSSSW-090609)		Water		Sampled: 09/06/09 14:00						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:33	
SSI0032-21 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
Mercury	7470A	0.00012	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:37	J
SSI0032-22 (G-RS7SW-090609)		Water		Sampled: 09/06/09 15:20						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 11:03	
SSI0032-23 (G-RS8SW-090609)		Water		Sampled: 09/06/09 16:25						
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50154	09/14/09 09:02	09/14/09 12:41	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/28/09 11:16
Redmond, WA 98077	Project Manager: Doug Morell	

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-05 (G-P101OFF-090409)										
			Other (L)				Sampled: 09/04/09 17:30			
Aluminum	6010B TMP	1500	36	120	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 16:19	
Lead	"	3.2	0.48	6.1	"	"	"	"	"	J
Arsenic	"	4.8	0.52	12	"	"	"	"	"	J
Calcium	"	570	6.1	220	"	"	"	"	"	
Antimony	"	ND	0.69	12	"	"	"	"	"	
Beryllium	"	0.055	0.0048	1.0	"	"	"	"	"	J
Chromium	"	1.8	0.19	5.2	"	"	"	"	"	J
Potassium	"	290	65	670	"	"	"	"	"	J
Selenium	"	ND	0.48	20	"	"	"	"	"	
Barium	"	24	0.061	2.0	"	"	"	"	"	
Iron	"	2300	1.9	40	"	"	"	"	"	
Silver	"	ND	0.18	4.0	"	"	"	"	"	
Magnesium	"	800	2.7	220	"	"	"	"	"	
Nickel	"	9.7	0.32	4.0	"	"	"	"	"	
Sodium	"	780	27	400	"	"	"	"	"	
Cadmium	"	ND	0.32	2.0	"	"	"	"	"	
Copper	"	12	0.89	4.0	"	"	"	"	"	
Manganese	"	31	0.032	4.0	"	"	"	"	"	
Cobalt	"	1.8	0.13	2.0	"	"	"	"	"	J
Thallium	"	ND	0.56	20	"	"	"	"	"	
Vanadium	"	8.5	0.12	2.0	"	"	"	"	"	
Zinc	"	21	0.81	10	"	"	"	"	"	

SSI0032-10 (G-RS5FP-090509)			Other (L)				Sampled: 09/05/09 15:00			
Aluminum	6010B TMP	360	36	120	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 16:57	
Lead	"	24	0.49	6.1	"	"	"	"	"	J
Arsenic	"	4.6	0.53	12	"	"	"	"	"	
Calcium	"	470	6.1	220	"	"	"	"	"	
Antimony	"	ND	0.70	12	"	"	"	"	"	
Beryllium	"	ND	0.0049	1.0	"	"	"	"	"	
Chromium	"	2.1	0.19	5.3	"	"	"	"	"	J
Potassium	"	180	65	670	"	"	"	"	"	J
Selenium	"	1.6	0.49	20	"	"	"	"	"	J
Barium	"	7.4	0.061	2.0	"	"	"	"	"	
Iron	"	390	1.9	41	"	"	"	"	"	
Silver	"	ND	0.18	4.1	"	"	"	"	"	
Magnesium	"	68	2.7	220	"	"	"	"	"	J
Nickel	"	39	0.33	4.1	"	"	"	"	"	
Sodium	"	850	28	410	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd, Suite 200	Project Number: 073-93312-03	10/28/09 11:16
Redmond, WA 98077	Project Manager: Doug Morell	

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-10 (G-RS5FP-090509)			Other (L)					Sampled: 09/05/09 15:00		
Cadmium	6010B TMP	ND	0.33	2.0	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 16:57	
Copper	"	69	0.90	4.1	"	"	"	"	"	
Manganese	"	8.7	0.033	4.1	"	"	"	"	"	
Cobalt	"	0.65	0.13	2.0	"	"	"	"	"	J
Thallium	"	ND	0.57	20	"	"	"	"	"	
Vanadium	"	110	0.12	2.0	"	"	"	"	"	
Zinc	"	67	0.82	10	"	"	"	"	"	
SSI0032-11 (G-RS4FP-090509)			Other (L)					Sampled: 09/05/09 16:08		
Aluminum	6010B TMP	340	34	120	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 17:03	
Lead	"	27	0.46	5.8	"	"	"	"	"	
Arsenic	"	4.4	0.50	12	"	"	"	"	"	J
Calcium	"	340	5.8	210	"	"	"	"	"	
Antimony	"	ND	0.66	12	"	"	"	"	"	
Beryllium	"	ND	0.0046	0.97	"	"	"	"	"	
Chromium	"	2.0	0.18	5.0	"	"	"	"	"	J
Potassium	"	ND	62	640	"	"	"	"	"	
Selenium	"	0.63	0.46	19	"	"	"	"	"	J
Barium	"	5.9	0.058	1.9	"	"	"	"	"	
Iron	"	170	1.8	39	"	"	"	"	"	
Silver	"	ND	0.17	3.9	"	"	"	"	"	
Magnesium	"	48	2.6	210	"	"	"	"	"	J
Nickel	"	34	0.31	3.9	"	"	"	"	"	
Sodium	"	970	26	390	"	"	"	"	"	
Cadmium	"	ND	0.31	1.9	"	"	"	"	"	
Copper	"	71	0.85	3.9	"	"	"	"	"	
Manganese	"	2.9	0.031	3.9	"	"	"	"	"	J
Cobalt	"	0.56	0.12	1.9	"	"	"	"	"	J
Thallium	"	ND	0.54	19	"	"	"	"	"	
Vanadium	"	140	0.12	1.9	"	"	"	"	"	
Zinc	"	15	0.77	9.7	"	"	"	"	"	

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 11:16

Metals (ICP) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-12 (G-RS3FP-090509)		Other (L)		Sampled: 09/05/09 16:35						
Aluminum	6010B TMP	120	40	130	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 17:10	J
Lead	"	ND	0.54	6.7	"	"	"	"	"	
Arsenic	"	1.7	0.58	13	"	"	"	"	"	J
Calcium	"	340	6.7	250	"	"	"	"	"	
Antimony	"	ND	0.76	13	"	"	"	"	"	
Beryllium	"	ND	0.0054	1.1	"	"	"	"	"	
Chromium	"	0.47	0.21	5.8	"	"	"	"	"	J
Potassium	"	ND	72	740	"	"	"	"	"	
Selenium	"	ND	0.54	22	"	"	"	"	"	
Barium	"	3.4	0.067	2.2	"	"	"	"	"	
Iron	"	57	2.1	45	"	"	"	"	"	
Silver	"	ND	0.20	4.5	"	"	"	"	"	
Magnesium	"	53	3.0	250	u	"	"	"	"	J, B
Nickel	"	20	0.36	4.5	"	"	"	"	"	
Sodium	"	1100	31	450	"	"	"	"	"	
Cadmium	"	ND	0.36	2.2	"	"	"	"	"	
Copper	"	12	0.99	4.5	"	"	"	"	"	
Manganese	"	1.4	0.036	4.5	"	"	"	"	"	J
Cobalt	"	0.28	0.14	2.2	"	"	"	"	"	J
Thallium	"	ND	0.63	22	"	"	"	"	"	
Vanadium	"	16	0.13	2.2	"	"	"	"	"	
Zinc	"	12	0.90	11	"	"	"	"	"	

SSI0032-13 (G-RS3aFP-090509)		Other (L)		Sampled: 09/05/09 17:00						
Aluminum	6010B TMP	85	33	110	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 17:17	J
Lead	"	ND	0.44	5.6	"	"	"	"	"	
Arsenic	"	1.2	0.48	11	"	"	"	"	"	J
Calcium	"	280	5.6	200	"	"	"	"	"	
Antimony	"	ND	0.63	11	"	"	"	"	"	
Beryllium	"	ND	0.0044	0.93	"	"	"	"	"	
Chromium	"	ND	0.17	4.8	"	"	"	"	"	
Potassium	"	ND	59	610	"	"	"	"	"	
Selenium	"	ND	0.44	19	"	"	"	"	"	
Barium	"	2.2	0.056	1.9	"	"	"	"	"	
Iron	"	130	1.7	37	"	"	"	"	"	
Silver	"	ND	0.17	3.7	"	"	"	"	"	
Magnesium	"	73	2.4	200	u	"	"	"	"	J, B
Nickel	"	4.6	0.30	3.7	"	"	"	"	"	
Sodium	"	1100	25	370	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 11:16

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-13	(G-RS3aFP-090509)	Other (L)		Sampled: 09/05/09 17:00						
Cadmium	6010B TMP	ND	0.30	1.9	mg/Kg	1x	50886	09/25/09 10:48	09/25/09 17:17	
Copper	"	4.6	0.81	3.7	"	"	"	"	"	
Manganese	"	1.2	0.030	3.7	"	"	"	"	"	J
Cobalt	"	ND	0.12	1.9	"	"	"	"	"	
Thallium	"	ND	0.52	19	"	"	"	"	"	
Vanadium	"	4.1	0.11	1.9	"	"	"	"	"	
Zinc	"	5.6	0.74	9.3	"	"	"	"	"	J



Randee Decker, Project Manager



ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: #SSI0032	
SAMPLES	Collect:	MATRIX	
See Attached Summary page		Asset # LNAPL Water	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA	BNA	Pest / PCB	TPH-Dx	PAH - SIM	OTHER	OTHER
1. Data Completeness			O	O	O		
2. Preservation, Holding Times			O	X ¹	O		
3. GC/MS Tune, Inst. Performance			O	O	O		
4. Calibrations			O	O	O		
5. Surrogates			X ²	O	O		
6. Internal Standards			O	O	X ³		
7. Lab Blanks, Field Blanks			O	O	X ⁴		
8. Lab Duplicates, Field Duplicates			O	O	O		
9. LCS, Blank Spike, MS/MSD			O	O	O		
10. Compound Identification, TICs			O	O	O		
11. Result Verification, D.Limits			O	O	O		
12. Overall Summary			O	O	O		

O = Data had no problems

Θ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or U)].

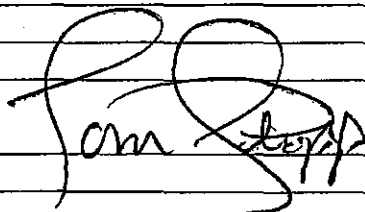
M = Data qualified due to major problems [typically more than 50% qualified (J/U)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: (1) Sample 'G-641-090509' results qualif. (J/U) since past hold time. (2) LNAPL Samples for PCB's had low Surrog. recovery. Assoc. results qual. (J/U). Water sample - 06 qualify (J/U) for same reason. (3) Single Surrog. out for select TPH & PAH samples - NO QUALIF. APPLIED. (4) IS out of limit qualifies p-Terphenyl/assoc. compds in LNAPL samples - 10 & -11 as estimated (J/U). (5) Contaminants in M. Blank qual. assoc. samples as 'U'.

Validated by:

Reviewed by:



Date: Nov. 11, 2009

Date:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable:

YES ☒ NO ☐

1. Data Package Completeness (Check if present).....

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ Detection Limits
- ☒ GC/MS Tuning
- ☒ Initial Calibration
- ☒ Continuing Calib.

- ☒ Blank Results
- ☒ Surrogate Results
- ☒ Internal Standards
- ☒ MS/MSD, LCS Results
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ Raw Data
- Other _____

/ Acceptable
x Absent
o Not required for
data package
requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply).....

☐



- ☒ Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection PAH's
- ☒ BNA samples extracted within 7 days (14 day soil) of collection
- ☒ BNA extracts analyzed within 40 days of collection
- ☒ Pest/PCBs samples extracted within 7 days (14 day soil) of collection
- ☒ Pest/PCBs extracts analyzed within 40 days of collection

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results: See Hold Time Summary
Tables attached.

⊗ NWTPH-Dx results for -06RE1 (B-GA1-090509) qualif.
J/UJ; H. Time @ 39 Days.

3. GC Instrument Tune, Performance Check

☒

☐

- ☒ GC/MS Tuning performed
- ☒ GC/MS Tuning within control limits
- ☐ GC/MS Tuning out of control limits, (qualify R/UR)

- ☐ Res Chk Mix, MidPoint AB <60%, (J for detects, UR other)
- ☐ PEM resolution <90% adj pks, (J for detects, UR other)
- ☐ DDT, Endrin breakdown >20%, (J for DDD, DDT, Endrin, Endrin Aldehyde, Endrin Ketone, or NJ/R)

Res Check Mix, MidPoint AB, TCMX, DCBP within RT windows from ICAL AB mixture (Fix or R/UR)

Comments/Qualified Results: _____

PAH 9/13 ✓ 9/15 ✓ 9/17 ✓

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☐

4. Initial & Continuing Calibration (Check all that apply)..... ☒ ☐

- GC/MS Data: ☒ Cal RRFs > 0.05 all cmpnds (If no, J/UR), [≥ 0.01 for Poor Performers] VOA, SVOA
☒ Cal RSD of RRF < 30% all cmpnds (If no, J detects) [$< 50\%$ for Poor Performers] VOA
☒ Cal RSD of RRF < 20.5% all cmpnds (If no, J detects) [$< 50\%$ or $\geq 30\%$ for Poor Performers] SVOA
 Note: *Applies to 2,4-DNT, 2-Nitrophenol, and 2,4-DMP only [SVOA].
☐ Continue Cal. $\pm 30\%$ Diff of RRF (If no, J/UJ) [$\pm 50\%$ Diff, Poor Performers] VOA, SVOA
☐ Continue Cal. %D < 25% all cmpnds (If no, J/UJ), VOA, SVOA
 Pesticide/PCB: ☒ RSD < 10% for performance checks (If no J detects)
☒ Stds analyzed prior to analysis, & at proper frequency
☒ Continuing Cal. % Diff. < 15% for quant. (< 20% for confirm column)

x - PCB cal out of limit high for select samples,
 All - ND, \therefore No Qual. applied.

5. Surrogates (Check all that apply)..... ☐ ☒

- ☐ Surrogates analyzed
☐ Recoveries within Method Control (lab) limits (VOA: 80 - 120%, SVOA: Lab Established, PEST: 30-150%)
☐ Recoveries above Method Control limits (J detects only)
☐ Recoveries below Method Control limits but $> 20\%$ (J/UJ)
☐ Recoveries below 20%, 10% for PEST (J/UR for VOA, J/UJ or UR for SVOA, J/UR for PEST)

Comments/Qualified Results TPH-D_x (LNAPL) ZFBP \uparrow for -05 & -11. No Qual
since these are single surrogates. (WATER) \checkmark .

PAHs (LNAPL) Terphenyl \uparrow for -10 & -11. Single surrg. out - No Qual.
(WATER) Nitrobenz \uparrow for samples -01, 04, 06. ZFBP \downarrow for -07. - No Qual.

(X) PCBs (LNAPL) DBBP \downarrow in -5, -10, -11, -12. Associated results
(X) qualif. (J/UJ). (WATER) TCMX & DBBP \downarrow in -06, & TCMX \downarrow in -21. Assoc
results Qualif (J/UJ).

6. Internal Standards Performance..... ☐ ☒

- ☒ Internal standards added to all QC and samples
☒ Internal standards areas within Control Limits* [$\pm 40\%$ VOA, $\pm 50\%$ SVOA]*
 *Associated with 12 Hour CCV Stnd.
☒ Internal standards out of Control limits but $> 10\%$ (J/UJ)
☐ Internal standards zero or $< 10\%$ of Control limits (J/UR)
☐ Internal standards RTs within ± 20 sec window (If no, J/UJ)

Comments/Qualified Results: PAHs (LNAPL) IS out for -10, -11 assoc.
w/ p-Terphenyl compounds qualif. (J/UJ). (WATER) \checkmark .

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☐ NO ☒7. Laboratory Blanks, Field Blanks (Check all that apply)..... ☐ ☒

- ☐ Method Blanks, Prep. Blanks analyzed after Cal Sinds and every 12 hours
☐ Method Blank Common Lab Contaminants, list: MeCl₂, Cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart
☐ Other Contaminants: Qualify results (< 5X RL) according to Chart below.
☐ Instrument blanks after all high level samples, All cmpnds must be <RL

Examples:

Comments/Qualified Results:

TPH Dx - (Water) MB0104 ✓ MB0121 ✓
 (LNAPL) MB0118 ✓ MB0094 ✓

MDL	BLANK		SAMPLE		Q
	Result	PQL	Result	Applied	
0.3	0.45	1.0	0.8	1.0 U	
0.3	0.99	1.0	1.8	1.8 J	
0.3	1.5	1.0	1.1	1.5 U	
0.3	1.5	1.0	1.8	1.8 J	
0.3	0	1.0	0.85	0.85 J	
0.3	0	1.0	1.8	1.8	

PCBs (LNAPL) MB0119 ✓
 (Water) MB335/16 ✓ 626/15 ✓

PAHs (LNAPL) MB0081 ✓

(WATER) 233/5 - aliph, 2mNaph, 1mNaph, Anthracene, Fluorene, Acen, Pyrene, Fluorene, Phenanth detected in MB. Assoc. samples qualif. 'U'

8. Duplicate, Field Duplicates (Check all that apply)..... ☒ ☐

- ☐ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
☐ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
☐ Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results

TPH: LCS/LCSD ✓ MS/MSD -20 ✓, -22 ✓, 9/18 ✓ LCS/LCSD
 10/15 ✓ LCS/LCSD ✓

PCB: MS/MSD on -05 ✓ #52216 ✓

PAH: MS/MSD on -11 ✓, (WATER): 50020 Batch ✓

9. MS/MSD, Lab Control Samples, Blank Spikes (Check all that apply)..... ☒ ☐

- ☒ LCS %R 80-120%
☐ LCS %R 50-79% or >120%, results >IDL estimated (J)
☐ LCS %R 50-79% and results <IDL estimated (UJ)
☐ LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results:

TPH (LNAPL) #00118 ✓ LCS, MS/MSD ✓; (WATER) #0104
 LCS/LCSD ✓ MS/MSD on -20 ✓, -22 ✓, 9/18 ✓ #00118, 0121 ✓, 10/15 ✓ #0094 ✓
 PCB (LNAPL) LCS ✓, MS/MSD on -05 PCB-1016 ↑ recovery, # 00500.
 detects (Qualif. U). Sample has no Detects NO Qual. (WATER) LCS ✓
 MS/MSD on -22 ✓, PAHs (LNAPL) LCS ✓, MS/MSD on -11 Fluorene ↑ qual. (J).
 (WATER) LCS 9/15 ✓, MS/MSD on -22 ✓.

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

10. Compound Identification, TICs..... ☒ ☐

Comments/Qualified Results: _____

11. Result Verification, Detection Limits ☒ ☐

☐ All results supported in raw data

☐ Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: _____

12. Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

SSI0032-08 (G-EMW06-090509)

Water

Sampled: 09/05/09 13:25

Dibenz(a,h)anthracene	8270C STD	ND	0.0017	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 17:17	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		109%			40 - 110 %	"			"	
2-Fluorobiphenyl		51%			50 - 110 %	"			"	
Terphenyl-d14		103%			50 - 135 %	"			"	

SSI0032-09 (G-EB-090509)

Water

Sampled: 09/05/09 14:00

Naphthalene	8270C STD	0.021	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/17/09 18:32	
2-Methylnaphthalene	"	0.013	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0098	0.0011	0.0094	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	ND	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.0012	0.00075	0.0094	"	"	"	"	"	J
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Acenaphthene	"	0.038	0.00094	0.0094	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0019	0.0015	0.0094	"	"	"	"	"	J
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.0034	0.0011	0.0094	"	"	"	"	"	J
Pyrene	"	ND	0.0016	0.0094	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0047	0.0010	0.0094	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz(a,h)anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		103%			40 - 110 %	"			"	
2-Fluorobiphenyl		86%			50 - 110 %	"			"	
Terphenyl-d14		105%			50 - 135 %	"			"	

SSI0032-14 (G-RS1SW-090609)

Water

Sampled: 09/06/09 09:45

Naphthalene	8270C STD	ND	0.0035	0.0096	ug/L	1x	50020	09/10/09 15:12	09/17/09 18:52	
2-Methylnaphthalene	"	ND	0.0029	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0024	0.0012	0.0096	"	"	"	"	"	J
Benzo[a]anthracene	"	ND	0.0023	0.0096	"	"	"	"	"	
Acenaphthylene	"	ND	0.0011	0.0096	"	"	"	"	"	
Anthracene	"	0.0011	0.00077	0.0096	"	"	"	"	"	J
Chrysene	"	ND	0.0020	0.0096	"	"	"	"	"	
Acenaphthene	"	0.0012	0.00096	0.0096	"	"	"	"	"	J

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
SSI0032-14 (G-RS1SW-090609)		Water		Sampled: 09/06/09 09:45						
Benzo[b]fluoranthene	8270C STD	ND	0.0025	0.0096	ug/L	1x	50020	09/10/09 15:12	09/17/09 18:52	
Fluoranthene	"	0.0020	0.0015	0.0096	"	"	"	"	"	J
Benzo[k]fluoranthene	"	ND	0.0023	0.0096	"	"	"	"	"	
Fluorene	"	0.0026	0.0012	0.0096	"	"	"	"	"	J
Pyrene	"	ND	0.0016	0.0096	"	"	"	"	"	
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0040	0.0011	0.0096	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0096	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0096	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0096	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		103%			40 - 110 %	"			"	
2-Fluorobiphenyl		87%			50 - 110 %	"			"	
Terphenyl-d14		102%			50 - 135 %	"			"	

SSI0032-15 (G-RS2SW-090609)		Water		Sampled: 09/06/09 10:45						
Naphthalene	8270C STD	ND	0.0036	0.0099	ug/L	1x	50020	09/10/09 15:12	09/15/09 18:17	
2-Methylnaphthalene	"	ND	0.0030	0.013	"	"	"	"	"	
1-Methylnaphthalene	"	0.0016	0.0012	0.0099	u	"	"	"	"	J-B
Benzo[a]anthracene	"	ND	0.0024	0.0099	"	"	"	"	"	
Acenaphthylene	"	ND	0.0011	0.0099	"	"	"	"	"	
Anthracene	"	0.0013	0.00079	0.0099	u	"	"	"	"	J-B
Chrysene	"	ND	0.0021	0.0099	"	"	"	"	"	
Acenaphthene	"	0.0011	0.00099	0.0099	u	"	"	"	"	J-B
Benzo[b]fluoranthene	"	ND	0.0026	0.0099	"	"	"	"	"	
Fluoranthene	"	0.0031	0.0016	0.0099	u	"	"	"	"	J-B
Benzo[k]fluoranthene	"	ND	0.0024	0.0099	"	"	"	"	"	
Fluorene	"	0.0023	0.0012	0.0099	u	"	"	"	"	J-B
Pyrene	"	0.0036	0.0017	0.0099	u	"	"	"	"	J-B
Benzo[a]pyrene	"	ND	0.0019	0.020	"	"	"	"	"	
Phenanthrene	"	0.0054	0.0011	0.0099	u	"	"	"	"	J-B
Indeno[1,2,3-cd]pyrene	"	ND	0.0020	0.0099	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0018	0.0099	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0020	0.0099	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		92%			40 - 110 %	"			"	
2-Fluorobiphenyl		80%			50 - 110 %	"			"	
Terphenyl-d14		92%			50 - 135 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-16 (G-RS3SW-090609)		Water		Sampled: 09/06/09 12:00						
Naphthalene	8270C STD	ND	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 18:38	
2-Methylnaphthalene	"	ND	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0035	0.0011	0.0094	u	"	"	"	"	J-B
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	ND	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.0015	0.00075	0.0094	u	"	"	"	"	J-B
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Acenaphthene	"	0.0029	0.00094	0.0094	u	"	"	"	"	J-B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0026	0.0015	0.0094	u	"	"	"	"	J-B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.0046	0.0011	0.0094	u	"	"	"	"	J-B
Pyrene	"	0.0017	0.0016	0.0094	u	"	"	"	"	J-B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0069	0.0010	0.0094	u	"	"	"	"	J-B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		104%			40 - 110 %	"			"	
2-Fluorobiphenyl		90%			50 - 110 %	"			"	
Terphenyl-d14		108%			50 - 135 %	"			"	

SSI0032-17 (G-RS3DSW-090609)		Water		Sampled: 09/06/09 11:40						
Naphthalene	8270C STD	ND	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 18:58	
2-Methylnaphthalene	"	ND	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0061	0.0011	0.0094	u	"	"	"	"	J-B
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	ND	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.0016	0.00075	0.0094	u	"	"	"	"	J-B
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Acenaphthene	"	0.0029	0.00094	0.0094	u	"	"	"	"	J-B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0028	0.0015	0.0094	u	"	"	"	"	J-B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.0046	0.0011	0.0094	u	"	"	"	"	J-B
Pyrene	"	0.0027	0.0016	0.0094	u	"	"	"	"	J-B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0063	0.0010	0.0094	u	"	"	"	"	J-B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)
TestAmerica Tacoma

Analyte	Method	Result	MDL ^a	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-17 (G-RS3DSW-090609)		Water		Sampled: 09/06/09 11:40						
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		106%		40 - 110 %		"		"		
2-Fluorobiphenyl		91%		50 - 110 %		"		"		
Terphenyl-d14		107%		50 - 135 %		"		"		
SSI0032-19 (G-RS4SW-090609)		Water		Sampled: 09/06/09 13:30						
Naphthalene	8270C STD	0.0076	0.0036	0.0099	ug/L	1x	50020	09/10/09 15:12	09/15/09 19:18	J-B
2-Methylnaphthalene	"	0.011	0.0030	0.013	ug/L	"	"	"	"	J-B
1-Methylnaphthalene	"	0.11	0.0012	0.0099	"	"	"	"	"	J-B
Benzo[a]anthracene	"	0.0077	0.0024	0.0099	"	"	"	"	"	J
Acenaphthylene	"	0.0094	0.0011	0.0099	"	"	"	"	"	J
Anthracene	"	0.021	0.00079	0.0099	"	"	"	"	"	J-B
Chrysene	"	0.015	0.0021	0.0099	"	"	"	"	"	J-B
Acenaphthene	"	0.044	0.00099	0.0099	"	"	"	"	"	J-B
Benzo[b]fluoranthene	"	ND	0.0026	0.0099	"	"	"	"	"	J-B
Fluoranthene	"	0.017	0.0016	0.0099	"	"	"	"	"	J-B
Benzo[k]fluoranthene	"	ND	0.0024	0.0099	"	"	"	"	"	J-B
Fluorene	"	0.13	0.0012	0.0099	"	"	"	"	"	J-B
Pyrene	"	0.039	0.0017	0.0099	"	"	"	"	"	J-B
Benzo[a]pyrene	"	ND	0.0019	0.020	"	"	"	"	"	J-B
Phenanthrene	"	0.21	0.0011	0.0099	"	"	"	"	"	J-B
Indeno[1,2,3-cd]pyrene	"	ND	0.0020	0.0099	"	"	"	"	"	J-B
Dibenz[a,h]anthracene	"	ND	0.0018	0.0099	"	"	"	"	"	J-B
Benzo[g,h,i]perylene	"	ND	0.0020	0.0099	"	"	"	"	"	J-B
Surrogate(s): Nitrobenzene-d5		99%		40 - 110 %		"		"		
2-Fluorobiphenyl		84%		50 - 110 %		"		"		
Terphenyl-d14		104%		50 - 135 %		"		"		



Golder Associates, Inc.

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Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)


TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-20 (G-RS5SW-090609)		Water		Sampled: 09/06/09 14:00						
Naphthalene	8270C STD	0.054	0.0039	0.011	ug/L	1x	50020	09/10/09 15:12	09/17/09 17:32	
2-Methylnaphthalene	"	0.013	0.0032	0.014	"	"	"	"	"	J
1-Methylnaphthalene	"	0.21	0.0013	0.011	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.0026	0.011	"	"	"	"	"	
Acenaphthylene	"	0.0071	0.0012	0.011	"	"	"	"	"	J
Anthracene	"	0.0049	0.00086	0.011	"	"	"	"	"	J
Chrysene	"	ND	0.0023	0.011	"	"	"	"	"	
Acenaphthene	"	0.059	0.0011	0.011	"	"	"	"	"	
Benzo[b]fluoranthene	"	ND	0.0028	0.011	"	"	"	"	"	
Fluoranthene	"	0.0038	0.0017	0.011	"	"	"	"	"	J
Benzo[k]fluoranthene	"	ND	0.0026	0.011	"	"	"	"	"	
Fluorene	"	0.097	0.0013	0.011	"	"	"	"	"	
Pyrene	"	0.0049	0.0018	0.011	"	"	"	"	"	J
Benzo[a]pyrene	"	ND	0.0021	0.022	"	"	"	"	"	
Phenanthrene	"	0.035	0.0012	0.011	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0022	0.011	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0019	0.011	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0022	0.011	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		95%			40 - 110 %	"			"	
2-Fluorobiphenyl		73%			50 - 110 %	"			"	
Terphenyl-d14		101%			50 - 135 %	"			"	

SSI0032-21 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
Naphthalene	8270C STD	ND	0.0036	0.010	ug/L	1x	50020	09/10/09 15:12	09/17/09 17:52	
2-Methylnaphthalene	"	ND	0.0030	0.013	"	"	"	"	"	
1-Methylnaphthalene	"	0.0056	0.0012	0.010	"	"	"	"	"	J
Benzo[a]anthracene	"	ND	0.0024	0.010	"	"	"	"	"	
Acenaphthylene	"	ND	0.0011	0.010	"	"	"	"	"	
Anthracene	"	0.0015	0.00080	0.010	"	"	"	"	"	J
Chrysene	"	ND	0.0021	0.010	"	"	"	"	"	
Acenaphthene	"	0.0025	0.0010	0.010	"	"	"	"	"	J
Benzo[b]fluoranthene	"	ND	0.0026	0.010	"	"	"	"	"	
Fluoranthene	"	0.0025	0.0016	0.010	"	"	"	"	"	J
Benzo[k]fluoranthene	"	ND	0.0024	0.010	"	"	"	"	"	
Fluorene	"	0.0045	0.0012	0.010	"	"	"	"	"	J
Pyrene	"	0.0022	0.0017	0.010	"	"	"	"	"	J
Benzo[a]pyrene	"	ND	0.0019	0.020	"	"	"	"	"	
Phenanthrene	"	0.0085	0.0011	0.010	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.0020	0.010	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-21 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
Dibenz(a,h)anthracene	8270C STD	ND	0.0018	0.010	ug/L	1x	50020	09/10/09 15:12	09/17/09 17:52	
Benzo(g,h,i)perylene	"	ND	0.0020	0.010	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			104%			40 - 110 %	"		"	
<i>2-Fluorobiphenyl</i>			90%			50 - 110 %	"		"	
<i>Terphenyl-d14</i>			104%			50 - 135 %	"		"	
SSI0032-22 (G-RS7SW-090609)		Water		Sampled: 09/06/09 15:20						
Naphthalene	8270C STD	ND	0.0034	0.0095	ug/L	1x	50020	09/10/09 15:12	09/15/09 13:32	
2-Methylnaphthalene	"	ND	0.0029	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0049	0.0011	0.0095	U	"	"	"	"	J-B
Benzo(a)anthracene	"	ND	0.0023	0.0095	"	"	"	"	"	
Acenaphthylene	"	0.0015	0.0010	0.0095	"	"	"	"	"	J
Anthracene	"	0.0015	0.00076	0.0095	U	"	"	"	"	J-B
Chrysene	"	ND	0.0020	0.0095	"	"	"	"	"	
Acenaphthene	"	0.0051	0.00095	0.0095	U	"	"	"	"	J-B
Benzo(b)fluoranthene	"	ND	0.0025	0.0095	"	"	"	"	"	
Fluoranthene	"	0.0033	0.0015	0.0095	U	"	"	"	"	J-B
Benzo(k)fluoranthene	"	ND	0.0023	0.0095	"	"	"	"	"	
Fluorene	"	0.0047	0.0011	0.0095	U	"	"	"	"	J-B
Pyrene	"	0.0054	0.0016	0.0095	U	"	"	"	"	J-B
Benzo(a)pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0034	0.0010	0.0095	U	"	"	"	"	J-B
Indeno(1,2,3-cd)pyrene	"	ND	0.0019	0.0095	"	"	"	"	"	
Dibenz(a,h)anthracene	"	ND	0.0017	0.0095	"	"	"	"	"	
Benzo(g,h,i)perylene	"	ND	0.0019	0.0095	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			104%			40 - 110 %	"		"	
<i>2-Fluorobiphenyl</i>			89%			50 - 110 %	"		"	
<i>Terphenyl-d14</i>			95%			50 - 135 %	"		"	

SSI0032-23 (G-RS8SW-090609)

Water

Sampled: 09/06/09 16:25

Naphthalene	8270C STD	ND	0.0034	0.0095	ug/L	1x	50020	09/10/09 15:12	09/17/09 18:12	
2-Methylnaphthalene	"	ND	0.0029	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0041	0.0011	0.0095	"	"	"	"	"	J
Benzo(a)anthracene	"	ND	0.0023	0.0095	"	"	"	"	"	
Acenaphthylene	"	ND	0.0010	0.0095	"	"	"	"	"	
Anthracene	"	0.0011	0.00076	0.0095	"	"	"	"	"	J
Chrysene	"	ND	0.0020	0.0095	"	"	"	"	"	
Acenaphthene	"	0.0017	0.00095	0.0095	"	"	"	"	"	J

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-23 (G-RS8SW-090609)		Water		Sampled: 09/06/09 16:25						
Benzo[b]fluoranthene	8270C STD	ND	0.0025	0.0095	ug/L	1x	50020	09/10/09 15:12	09/17/09 18:12	
Fluoranthene	"	0.0022	0.0015	0.0095	"	"	"	"	"	J
Benzo[k]fluoranthene	"	ND	0.0023	0.0095	"	"	"	"	"	
Fluorene	"	0.0026	0.0011	0.0095	"	"	"	"	"	J
Pyrene	"	0.0023	0.0016	0.0095	"	"	"	"	"	J
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0033	0.0010	0.0095	"	"	"	"	"	J
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0095	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0095	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0095	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		105%			40 - 110 %	"			"	
2-Fluorobiphenyl		95%			50 - 110 %	"			"	
Terphenyl-d14		111%			50 - 135 %	"			"	



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-05 (G-P1010FP-090409)		Other (L)		Sampled: 09/04/09 17:30						
1-Methylnaphthalene	EPA 8270 mod.	114	—	2.88	mg/kg	1x	9090081	09/11/09 13:20	09/13/09 18:25	
2-Methylnaphthalene	"	48.3	—	2.88	"	"	"	"	"	
Acenaphthene	"	29.2	—	2.88	"	"	"	"	"	
Acenaphthylene	"	ND	—	2.88	"	"	"	"	"	
Anthracene	"	33.5	—	2.88	"	"	"	"	"	
Benzo (a) anthracene	"	4.42	—	2.88	"	"	"	"	"	
Benzo (a) pyrene	"	4.62	—	2.88	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	2.88	"	"	"	"	"	
Benzo (ghi) perylene	"	14.0	—	2.88	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	2.88	"	"	"	"	"	
Chrysene	"	9.04	—	2.88	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	9.62	—	2.88	"	"	"	"	"	
Fluoranthene	"	8.27	—	2.88	"	"	"	"	"	
Fluorene	"	45.6	—	2.88	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	10.2	—	2.88	"	"	"	"	"	
Naphthalene	"	13.3	—	2.88	"	"	"	"	"	
Phenanthrene	"	88.8	—	2.88	"	"	"	"	"	
Pyrene	"	22.7	—	2.88	"	"	"	"	"	
Surrogate(s): 2-FBP		104%		34.5 - 148 %	"					
Nitrobenzene-d5		103%		33 - 141 %	"					
p-Terphenyl-d14		120%		37.8 - 150 %	"					

SSI0032-10 (G-RS5FP-090509)		Other (L)		Sampled: 09/05/09 15:00						
1-Methylnaphthalene	EPA 8270 mod.	15.3	—	3.06	mg/kg	1x	9090081	09/11/09 13:20	09/13/09 23:47	
2-Methylnaphthalene	"	ND	—	3.06	"	"	"	"	"	
Acenaphthene	"	33.1	—	3.06	"	"	"	"	"	
Acenaphthylene	"	ND	—	3.06	"	"	"	"	"	
Anthracene	"	96.9	—	3.06	"	"	"	"	"	
Benzo (a) anthracene	"	19.2	J	3.06	"	"	"	"	"	101
Benzo (a) pyrene	"	8.57	—	3.06	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	3.06	"	"	"	"	"	
Benzo (ghi) perylene	"	9.59	—	3.06	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	3.06	"	"	"	"	"	
Chrysene	"	45.7	J	3.06	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	4.29	—	3.06	"	"	"	"	"	
Fluoranthene	"	9.18	—	3.06	"	"	"	"	"	
Fluorene	"	86.3	—	3.06	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	4.49	—	3.06	"	"	"	"	"	
Naphthalene	"	ND	—	3.06	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-10 (G-RS5FP-090509)		Other (L)		Sampled: 09/05/09 15:00						
Phenanthrene	EPA 8270 mod.	205	—	3.06	mg/kg	1x	9090081	09/11/09 13:20	09/13/09 23:47	
Pyrene	"	118	—	3.06	"	"	"	"	"	101
Surrogate(s): 2-FBP		97.4%		34.5 - 148 %		"		"		
Nitrobenzene-d5		93.4%		33 - 141 %		"		"		
p-Terphenyl-d14		142%		37.8 - 150 %		"		"		101
SSI0032-11 (G-RS4FP-090509)		Other (L)		Sampled: 09/05/09 16:08						
1-Methylnaphthalene	EPA 8270 mod.	328	—	3.06	mg/kg	1x	9090081	09/11/09 13:20	09/14/09 00:08	
2-Methylnaphthalene	"	35.3	—	3.06	"	"	"	"	"	
Acenaphthene	"	100	—	3.06	"	"	"	"	"	
Acenaphthylene	"	ND	—	3.06	"	"	"	"	"	
Anthracene	"	120	—	3.06	"	"	"	"	"	
Benzo (a) anthracene	"	ND	UJ	3.06	"	"	"	"	"	101
Benzo (a) pyrene	"	11.0	J	3.06	"	"	"	"	"	101
Benzo (b) fluoranthene	"	ND	UJ	3.06	"	"	"	"	"	101
Benzo (ghi) perylene	"	12.2	J	3.06	"	"	"	"	"	101
Benzo (k) fluoranthene	"	ND	UJ	3.06	"	"	"	"	"	101
Chrysene	"	50.6	J	3.06	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	4.90	J	3.06	"	"	"	"	"	101
Fluoranthene	"	15.1	—	3.06	"	"	"	"	"	
Fluorene	"	178	J	3.06	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	3.88	J	3.06	"	"	"	"	"	101
Naphthalene	"	ND	—	3.06	"	"	"	"	"	
Phenanthrene	"	292	—	3.06	"	"	"	"	"	
Pyrene	"	161	J	3.06	"	"	"	"	"	101
Surrogate(s): 2-FBP		88.4%		34.5 - 148 %		"		"		
Nitrobenzene-d5		65.8%		33 - 141 %		"		"		
p-Terphenyl-d14		170%		37.8 - 150 %		"		"		101, ZX

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring


TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-12 (G-RS3FP-090509)		Other (L)		Sampled: 09/05/09 16:35						
Benzo (k) fluoranthene	EPA 8270 mod.	ND	—	3.12	mg/kg	1x	9090081	09/11/09 13:20	09/13/09 20:55	
Chrysene	"	23.1	—	3.12	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	3.12	"	"	"	"	"	
Fluoranthene	"	9.38	—	3.12	"	"	"	"	"	
Fluorene	"	45.6	—	3.12	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	3.12	"	"	"	"	"	
Naphthalene	"	7.29	—	3.12	"	"	"	"	"	
Phenanthrene	"	84.0	—	3.12	"	"	"	"	"	
Pyrene	"	55.8	—	3.12	"	"	"	"	"	
Surrogate(s): 2-FBP		95.4%		34.5 - 148 %	"	"	"	"	"	
Nitrobenzene-d5		101%		33 - 141 %	"	"	"	"	"	
p-Terphenyl-d14		133%		37.8 - 150 %	"	"	"	"	"	

SSI0032-13 (G-RS3aFP-090509)		Other (L)		Sampled: 09/05/09 17:00						
1-Methylnaphthalene	EPA 8270 mod.	47.6	—	2.73	mg/kg	1x	9090081	09/11/09 13:20	09/13/09 19:08	
2-Methylnaphthalene	"	45.6	—	2.73	"	"	"	"	"	
Acenaphthene	"	16.5	—	2.73	"	"	"	"	"	
Acenaphthylene	"	ND	—	2.73	"	"	"	"	"	
Anthracene	"	20.2	—	2.73	"	"	"	"	"	
Benzo (a) anthracene	"	3.27	—	2.73	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	2.73	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	2.73	"	"	"	"	"	
Benzo (ghi) perylene	"	3.64	—	2.73	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	2.73	"	"	"	"	"	
Chrysene	"	7.27	—	2.73	"	"	"	"	"	
Dibenzo (a,b) anthracene	"	2.73	—	2.73	"	"	"	"	"	
Fluoranthene	"	4.00	—	2.73	"	"	"	"	"	
Fluorene	"	25.3	—	2.73	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	2.91	—	2.73	"	"	"	"	"	
Naphthalene	"	6.91	—	2.73	"	"	"	"	"	
Phenanthrene	"	47.8	—	2.73	"	"	"	"	"	
Pyrene	"	15.3	—	2.73	"	"	"	"	"	
Surrogate(s): 2-FBP		104%		34.5 - 148 %	"	"	"	"	"	
Nitrobenzene-d5		104%		33 - 141 %	"	"	"	"	"	
p-Terphenyl-d14		110%		37.8 - 150 %	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



L NADL
Sample

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206-5302
ph: (509) 924.9200 fax: (509) 924.9290

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 11:16

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-05 (G-P1010FP-090409)		Other (L)		Sampled: 09/04/09 17:30						C7
PCB-1016	EPA 8082	ND	0.943	mg/kg	1x	9090119	09/18/09 08:06	09/18/09 18:14		
PCB-1221	"	ND	0.943	"	"	"	"	"		
PCB-1232	"	ND	0.943	"	"	"	"	"		
PCB-1242	"	ND	0.943	"	"	"	"	"		
PCB-1248	"	ND	0.943	"	"	"	"	"		
PCB-1254	"	ND	0.943	"	"	"	"	"		
PCB-1260	"	ND	0.943	"	"	"	"	"		
Surrogate(s): TCX		83.6%	50 - 150 %	"						
Decachlorobiphenyl		41.0%	50 - 150 %	"						Z
SSI0032-10 (G-RS5FP-090509)		Other (L)		Sampled: 09/05/09 15:00						C7
PCB-1016	EPA 8082	ND	0.962	mg/kg	1x	9090119	09/18/09 08:06	09/18/09 18:37		
PCB-1221	"	ND	0.962	"	"	"	"	"		
PCB-1232	"	ND	0.962	"	"	"	"	"		
PCB-1242	"	ND	0.962	"	"	"	"	"		
PCB-1248	"	ND	0.962	"	"	"	"	"		
PCB-1254	"	ND	0.962	"	"	"	"	"		
PCB-1260	"	ND	0.962	"	"	"	"	"		
Surrogate(s): TCX		79.2%	50 - 150 %	"						
Decachlorobiphenyl		38.8%	50 - 150 %	"						Z
SSI0032-11 (G-RS4FP-090509)		Other (L)		Sampled: 09/05/09 16:08						C7
PCB-1016	EPA 8082	ND	0.980	mg/kg	1x	9090119	09/18/09 08:06	09/18/09 19:00		
PCB-1221	"	ND	0.980	"	"	"	"	"		
PCB-1232	"	ND	0.980	"	"	"	"	"		
PCB-1242	"	ND	0.980	"	"	"	"	"		
PCB-1248	"	ND	0.980	"	"	"	"	"		
PCB-1254	"	ND	0.980	"	"	"	"	"		
PCB-1260	"	ND	0.980	"	"	"	"	"		
Surrogate(s): TCX		86.9%	50 - 150 %	"						
Decachlorobiphenyl		34.9%	50 - 150 %	"						Z

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-12 (G-RS3FP-090509)		Other (L)					Sampled: 09/05/09 16:35			C7
PCB-1016	EPA 8082	ND	—	0.877	mg/kg	1x	9090119	09/18/09 08:06	09/18/09 19:22	
PCB-1221	"	ND	—	0.877	"	"	"	"	"	
PCB-1232	"	ND	—	0.877	"	"	"	"	"	
PCB-1242	"	ND	—	0.877	"	"	"	"	"	
PCB-1248	"	ND	—	0.877	"	"	"	"	"	
PCB-1254	"	ND	—	0.877	"	"	"	"	"	
PCB-1260	"	ND	—	0.877	"	"	"	"	09/18/09 19:45	

Surrogate(s): TCX 80.8% 50 - 150 % " 09/18/09 19:22
Decachlorobiphenyl 48.6% 50 - 150 % " " Z

SSI0032-13 (G-RS3aFP-090509)		Other (L)					Sampled: 09/05/09 17:00			C7
PCB-1016	EPA 8082	ND	—	2.38	mg/kg	1x	9090119	09/18/09 08:06	09/18/09 19:45	
PCB-1221	"	ND	—	2.38	"	"	"	"	"	
PCB-1232	"	ND	—	2.38	"	"	"	"	"	
PCB-1242	"	ND	—	2.38	"	"	"	"	"	
PCB-1248	"	ND	—	2.38	"	"	"	"	"	
PCB-1254	"	ND	—	2.38	"	"	"	"	"	
PCB-1260	"	ND	—	2.38	"	"	"	"	09/18/09 20:08	

Surrogate(s): TCX 76.2% 50 - 150 % " 09/18/09 19:45
Decachlorobiphenyl 50.3% 50 - 150 % " "

✓ OK MEG 11-10-09

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-21 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
PCB-1016	8082 STD	ND	0.0045	0.050	ug/L	1x	50020	09/10/09 15:12	10/20/09 18:57	
PCB-1232	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1221	"	ND	0.0062	0.050	"	"	"	"	"	
PCB-1242	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1248	"	ND	0.0071	0.050	"	"	"	"	"	
PCB-1254	"	ND	0.0044	0.050	"	"	"	"	"	
PCB-1260	"	ND	0.0039	0.050	"	"	"	"	"	
SSI0032-21RE1 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
PCB-1016	8082 STD	ND	0.045	0.50	ug/L	1x	51857	10/12/09 15:10	10/13/09 19:35	
PCB-1232	"	ND	0.041	0.50	"	"	"	"	"	
PCB-1221	"	ND	0.062	0.50	"	"	"	"	"	
PCB-1242	"	ND	0.041	0.50	"	"	"	"	"	
PCB-1248	"	ND	0.071	0.50	"	"	"	"	"	
PCB-1254	"	ND	0.044	0.50	"	"	"	"	"	
PCB-1260	"	ND	0.039	0.50	"	"	"	"	"	
SSI0032-21RE2 (G-RS6SW-090609)		Water		Sampled: 09/06/09 14:50						
PCB-1016	8082 STD	ND	0.0045	0.050	ug/L	1x	52716	10/12/09 15:10	10/23/09 17:34	
PCB-1232	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1221	"	ND	0.0062	0.050	"	"	"	"	"	
PCB-1242	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1248	"	ND	0.0071	0.050	"	"	"	"	"	
PCB-1254	"	ND	0.0044	0.050	"	"	"	"	"	
PCB-1260	"	ND	0.0039	0.050	"	"	"	"	"	
Surrogate(s): Tetrachloro-m-xylene			56%	60 - 150 %		"			"	X
DCB Decachlorobiphenyl			53%	40 - 135 %		"			"	
SSI0032-22 (G-RS7SW-090609)		Water		Sampled: 09/06/09 15:20						
PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	50020	09/10/09 15:12	10/20/09 19:28	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0059	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.048	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-22RE1 (G-RS7SW-090609)			Water		Sampled: 09/06/09 15:20					
PCB-1016	8082 STD	ND	0.0044	0.049	ug/L	1x	52716	10/12/09 15:10	10/23/09 17:50	
PCB-1232	"	ND	0.0040	0.049	"	"	"	"	"	
PCB-1221	"	ND	0.0060	0.049	"	"	"	"	"	
PCB-1242	"	ND	0.0040	0.049	"	"	"	"	"	
PCB-1248	"	ND	0.0069	0.049	"	"	"	"	"	
PCB-1254	"	ND	0.0043	0.049	"	"	"	"	"	
PCB-1260	"	ND	0.0038	0.049	"	"	"	"	"	
Surrogate(s): <i>Tetrachloro-m-xylene</i>			61%			60 - 150 %	"		"	
<i>DCB Decachlorobiphenyl</i>			61%			40 - 135 %	"		"	
SSI0032-23 (G-RS8SW-090609)			Water		Sampled: 09/06/09 16:25					
PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	50020	09/10/09 15:12	10/20/09 19:44	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.048	"	"	"	"	"	
SSI0032-23RE1 (G-RS8SW-090609)			Water		Sampled: 09/06/09 16:25					
PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	52716	10/12/09 15:10	10/23/09 18:36	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.048	"	"	"	"	"	
Surrogate(s): <i>Tetrachloro-m-xylene</i>			68%			60 - 150 %	"		"	
<i>DCB Decachlorobiphenyl</i>			66%			40 - 135 %	"		"	



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-06 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	50020	09/10/09 15:12	10/20/09 16:53	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	
SSI0032-06RE1 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
PCB-1016	8082 STD	ND	0.042	0.47	ug/L	1x	51857	10/12/09 15:10	10/13/09 17:16	
PCB-1232	"	ND	0.039	0.47	"	"	"	"	"	
PCB-1221	"	ND	0.058	0.47	"	"	"	"	"	
PCB-1242	"	ND	0.039	0.47	"	"	"	"	"	
PCB-1248	"	ND	0.067	0.47	"	"	"	"	"	
PCB-1254	"	ND	0.042	0.47	"	"	"	"	"	
PCB-1260	"	ND	0.037	0.47	"	"	"	"	"	
SSI0032-06RE2 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52716	10/12/09 15:10	10/23/09 15:15	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	
Surrogate(s):		Tetrachloro-m-xylene		59%	60 - 150 %	"	"	"	"	X
		DCB Decachlorobiphenyl		33%	40 - 135 %	"	"	"	"	X
SSI0032-09 (G-EB-090509)		Water		Sampled: 09/05/09 14:00						
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	50020	09/10/09 15:12	10/20/09 17:09	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-09RE1 (G-EB-090509)		Water		Sampled: 09/05/09 14:00						
PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	52716	10/12/09 15:10	10/23/09 15:30	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0060	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0038	0.048	"	"	"	"	"	

Surrogate(s): *Tetrachloro-m-xylene*
DCB Decachlorobiphenyl

69%
66%

60 - 150 %
40 - 135 %

"
"

SSI0032-14 (G-RS1SW-090609)		Water		Sampled: 09/06/09 09:45						
PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	50020	09/10/09 15:12	10/20/09 17:24	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0060	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0038	0.048	"	"	"	"	"	

SSI0032-14RE1 (G-RS1SW-090609)		Water		Sampled: 09/06/09 09:45						
PCB-1016	8082 STD	ND	0.0045	0.050	ug/L	1x	52716	10/12/09 15:10	10/23/09 15:46	
PCB-1232	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1221	"	ND	0.0062	0.050	"	"	"	"	"	
PCB-1242	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1248	"	ND	0.0071	0.050	"	"	"	"	"	
PCB-1254	"	ND	0.0044	0.050	"	"	"	"	"	
PCB-1260	"	ND	0.0039	0.050	"	"	"	"	"	

Surrogate(s): *Tetrachloro-m-xylene*
DCB Decachlorobiphenyl

63%
62%

60 - 150 %
40 - 135 %

"
"

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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SSI0032-15 (G-RS2SW-090609)

Water

Sampled: 09/06/09 10:45

PCB-1016	8082 STD	ND	0.0045	0.050	ug/L	1x	50020	09/10/09 15:12	10/20/09 17:40	
PCB-1232	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1221	"	ND	0.0061	0.050	"	"	"	"	"	
PCB-1242	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1248	"	ND	0.0070	0.050	"	"	"	"	"	
PCB-1254	"	ND	0.0044	0.050	"	"	"	"	"	
PCB-1260	"	ND	0.0039	0.050	"	"	"	"	"	

SSI0032-15RE1 (G-RS2SW-090609)

Water

Sampled: 09/06/09 10:45

PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	52716	10/12/09 15:10	10/23/09 16:01	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.048	"	"	"	"	"	

Surrogate(s): Tetrachloro-m-xylene
DCB Decachlorobiphenyl

72% 60 - 150 %
67% 40 - 135 %

SSI0032-16 (G-RS3SW-090609)

Water

Sampled: 09/06/09 12:00

PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	50020	09/10/09 15:12	10/20/09 17:55	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0057	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

SSI0032-16RE1 (G-RS3SW-090609)

Water

Sampled: 09/06/09 12:00

PCB-1016	8082 STD	ND	0.0044	0.049	ug/L	1x	52716	10/12/09 15:10	10/23/09 16:17	
PCB-1232	"	ND	0.0040	0.049	"	"	"	"	"	
PCB-1221	"	ND	0.0060	0.049	"	"	"	"	"	
PCB-1242	"	ND	0.0040	0.049	"	"	"	"	"	
PCB-1248	"	ND	0.0069	0.049	"	"	"	"	"	
PCB-1254	"	ND	0.0043	0.049	"	"	"	"	"	
PCB-1260	"	ND	0.0038	0.049	"	"	"	"	"	

Surrogate(s): Tetrachloro-m-xylene

67% 60 - 150 %

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-16RE1 (G-RS3SW-090609)										
Water			Sampled: 09/06/09 12:00							
DCB Decachlorobiphenyl			61%	40 - 135 %		1x	10/23/09 16:17			
SSI0032-17 (G-RS3DSW-090609)										
Water			Sampled: 09/06/09 11:40							
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	50020	09/10/09 15:12	10/20/09 18:11	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	
SSI0032-17RE1 (G-RS3DSW-090609)										
Water			Sampled: 09/06/09 11:40							
PCB-1016	8082 STD	ND	0.0043	0.048	ug/L	1x	52716	10/12/09 15:10	10/23/09 16:32	
PCB-1232	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1221	"	ND	0.0059	0.048	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.048	"	"	"	"	"	
PCB-1248	"	ND	0.0068	0.048	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.048	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.048	"	"	"	"	"	
Surrogate(s): Tetrachloro-m-xylene			71%	60 - 150 %		"	"			
DCB Decachlorobiphenyl			69%	40 - 135 %		"	"			
SSI0032-19 (G-RS4SW-090609)										
Water			Sampled: 09/06/09 13:30							
PCB-1016	8082 STD	ND	0.0045	0.050	ug/L	1x	50020	09/10/09 15:12	10/20/09 18:26	
PCB-1232	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1221	"	ND	0.0061	0.050	"	"	"	"	"	
PCB-1242	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1248	"	ND	0.0070	0.050	"	"	"	"	"	
PCB-1254	"	ND	0.0044	0.050	"	"	"	"	"	
PCB-1260	"	ND	0.0039	0.050	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-19RE1 (G-RS4SW-090609)		Water		Sampled: 09/06/09 13:30						
PCB-1016	8082 STD	ND	0.0045	0.050	ug/L	1x	52716	10/12/09 15:10	10/23/09 16:48	
PCB-1232	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1221	"	ND	0.0061	0.050	"	"	"	"	"	
PCB-1242	"	ND	0.0041	0.050	"	"	"	"	"	
PCB-1248	"	ND	0.0070	0.050	"	"	"	"	"	
PCB-1254	"	ND	0.0044	0.050	"	"	"	"	"	
PCB-1260	"	ND	0.0039	0.050	"	"	"	"	"	

Surrogate(s): *Tetrachloro-m-xylene*
DCB Decachlorobiphenyl

65%
61%

60 - 150 %
40 - 135 %

SSI0032-20 (G-RS5SW-090609)		Water		Sampled: 09/06/09 14:00						
PCB-1016	8082 STD	ND	0.0049	0.054	ug/L	1x	50020	09/10/09 15:12	10/20/09 18:42	
PCB-1232	"	ND	0.0044	0.054	"	"	"	"	"	
PCB-1221	"	ND	0.0067	0.054	"	"	"	"	"	
PCB-1242	"	ND	0.0044	0.054	"	"	"	"	"	
PCB-1248	"	ND	0.0077	0.054	"	"	"	"	"	
PCB-1254	"	ND	0.0048	0.054	"	"	"	"	"	
PCB-1260	"	ND	0.0042	0.054	"	"	"	"	"	

SSI0032-20RE1 (G-RS5SW-090609)		Water		Sampled: 09/06/09 14:00						
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52716	10/12/09 15:10	10/23/09 17:03	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	

Surrogate(s): *Tetrachloro-m-xylene*
DCB Decachlorobiphenyl

61%
60%

60 - 150 %
40 - 135 %

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL ^a	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-01 (G-HC1R-090409)		Water		Sampled: 09/04/09 09:00						
Naphthalene	\$270C STD	0.078	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 14:32	B
2-Methylnaphthalene	"	0.012	0.0028	0.012	"	"	"	"	"	B
1-Methylnaphthalene	"	0.069	0.0011	0.0094	"	"	"	"	"	B
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	0.027	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.036	0.00075	0.0094	"	"	"	"	"	B
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Acenaphthene	"	0.21	0.00094	0.0094	"	"	"	"	"	B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0070	0.0015	0.0094	u	"	"	"	"	B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.12	0.0011	0.0094	"	"	"	"	"	B
Pyrene	"	0.014	0.0016	0.0094	"	"	"	"	"	B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0099	0.0010	0.0094	"	"	"	"	"	B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		113%		40 - 110 %	"					X, I
2-Fluorobiphenyl		55%		50 - 110 %	"					
Terphenyl-d14		90%		50 - 135 %	"					

SSI0032-02 (G-EW3-090409)		Water		Sampled: 09/04/09 11:20						
Naphthalene	\$270C STD	0.017	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 15:36	B
2-Methylnaphthalene	"	0.0074	0.0028	0.012	u	"	"	"	"	B
1-Methylnaphthalene	"	0.045	0.0011	0.0094	"	"	"	"	"	B
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	0.0055	0.0010	0.0094	"	"	"	"	"	J
Anthracene	"	0.0096	0.00075	0.0094	"	"	"	"	"	B
Chrysene	"	0.0023	0.0020	0.0094	"	"	"	"	"	J
Acenaphthene	"	0.040	0.00094	0.0094	"	"	"	"	"	B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.014	0.0015	0.0094	"	"	"	"	"	B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.054	0.0011	0.0094	"	"	"	"	"	B
Pyrene	"	0.033	0.0016	0.0094	"	"	"	"	"	B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.036	0.0010	0.0094	"	"	"	"	"	B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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SSI0032-02 (G-EW3-090409)

Water

Sampled: 09/04/09 11:20

Dibenz(a,h)anthracene	8270C STD	ND	0.0017	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 15:36	
Benzo(g,h,i)perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		98%			40 - 110 %	"			"	
2-Fluorobiphenyl		72%			50 - 110 %	"			"	
Terphenyl-d14		94%			50 - 135 %	"			"	

SSI0032-03 (G-EW4-090409)

Water

Sampled: 09/04/09 13:20

Naphthalene	8270C STD	0.0053	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 15:36	J-B
2-Methylnaphthalene	"	ND	0.0028	0.012	"	"	"	"	"	
1-Methylnaphthalene	"	0.0026	0.0011	0.0094	"	"	"	"	"	J-B
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	ND	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.0018	0.00075	0.0094	"	"	"	"	"	J-B
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Acenaphthene	"	0.0041	0.00094	0.0094	"	"	"	"	"	J-B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0020	0.0015	0.0094	"	"	"	"	"	J-B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.0023	0.0011	0.0094	"	"	"	"	"	J-B
Pyrene	"	0.0020	0.0016	0.0094	"	"	"	"	"	J-B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.0037	0.0010	0.0094	"	"	"	"	"	J-B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz(a,h)anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo(g,h,i)perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		101%			40 - 110 %	"			"	
2-Fluorobiphenyl		77%			50 - 110 %	"			"	
Terphenyl-d14		97%			50 - 135 %	"			"	

SSI0032-04 (G-EMW4-090409)


Water

Sampled: 09/04/09 15:35

Naphthalene	8270C STD	0.042	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 16:16	J-B
2-Methylnaphthalene	"	0.066	0.0028	0.012	"	"	"	"	"	J-B
1-Methylnaphthalene	"	0.034	0.0011	0.0094	"	"	"	"	"	J-B
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Acenaphthylene	"	0.0073	0.0010	0.0094	"	"	"	"	"	J
Anthracene	"	0.017	0.00075	0.0094	"	"	"	"	"	J-B
Chrysene	"	0.0052	0.0020	0.0094	"	"	"	"	"	J
Acenaphthene	"	0.049	0.00094	0.0094	"	"	"	"	"	J-B

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-04 (G-EMW04-090409)		Water		Sampled: 09/04/09 15:35						
Benzo[b]fluoranthene	8270C STD	ND	0.0025	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 16:16	
Fluoranthene	"	0.0075	0.0015	0.0094	"	"	"	"	"	B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.078	0.0011	0.0094	"	"	"	"	"	B
Pyrene	"	0.015	0.0016	0.0094	"	"	"	"	"	B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.014	0.0010	0.0094	"	"	"	"	"	B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz(a,h)anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		131%			40 - 110 %	"			"	X, I
2-Fluorobiphenyl		59%			50 - 110 %	"			"	
Terphenyl-d14		103%			50 - 135 %	"			"	
SSI0032-06 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
Naphthalene	8270C STD	0.039	0.0034	0.0094	ug/L	1x	50020	09/10/09 15:12	09/15/09 16:36	B
2-Methylnaphthalene	"	0.0077	0.0028	0.012	"	"	"	"	"	B
1-Methylnaphthalene	"	0.077	0.0011	0.0094	"	"	"	"	"	B
Benzo[a]anthracene	"	0.0024	0.0023	0.0094	"	"	"	"	"	J
Acenaphthylene	"	0.042	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.033	0.00075	0.0094	"	"	"	"	"	B
Chrysene	"	0.0065	0.0020	0.0094	"	"	"	"	"	J
Acenaphthene	"	0.20	0.00094	0.0094	"	"	"	"	"	B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.018	0.0015	0.0094	"	"	"	"	"	B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	0.47	0.0011	0.0094	"	"	"	"	"	B
Pyrene	"	0.019	0.0016	0.0094	"	"	"	"	"	B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	0.040	0.0010	0.0094	"	"	"	"	"	B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz(a,h)anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		115%			40 - 110 %	"			"	X, I
2-Fluorobiphenyl		77%			50 - 110 %	"			"	
Terphenyl-d14		100%			50 - 135 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 11:16

Semivolatile Organic Compounds (GC/MS SIM)

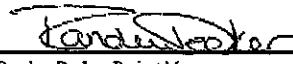
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-07 (G-EMW05-090509)		Water		Sampled: 09/05/09 11:25						
Naphthalene	8270C STD	2.4	0.0055	0.0096	ug/L	1x	50020	09/10/09 15:12	09/15/09 16:56	B
2-Methylnaphthalene	"	1.6	0.0029	0.012	"	"	"	"	"	B
1-Methylnaphthalene	"	9.7	0.012	0.096	"	10x	"	"	09/17/09 19:12	
Benzo[a]anthracene	"	ND	0.0023	0.0096	"	1x	"	"	09/15/09 16:56	
Acenaphthylene	"	0.13	0.0011	0.0096	"	"	"	"	"	
Anthracene	"	0.19	0.00077	0.0096	"	"	"	"	"	B
Chrysene	"	0.0024	0.0020	0.0096	"	"	"	"	"	J
Acenaphthene	"	1.0	0.00096	0.0096	"	"	"	"	"	B
Benzo[b]fluoranthene	"	ND	0.0025	0.0096	"	"	"	"	"	
Fluoranthene	"	0.048	0.0015	0.0096	"	"	"	"	"	B
Benzo[k]fluoranthene	"	ND	0.0023	0.0096	"	"	"	"	"	
Fluorene	"	1.3	0.0012	0.0096	"	"	"	"	"	B
Pyrene	"	0.055	0.0016	0.0096	"	"	"	"	"	B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	1.3	0.0011	0.0096	"	"	"	"	"	B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0096	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0096	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0096	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		91%			40 - 110 %	"			"	
2-Fluorobiphenyl		34%			50 - 110 %	"			"	X, I
Terphenyl-d14		94%			50 - 135 %	"			"	

SSI0032-08 (G-EMW06-090509)		Water		Sampled: 09/05/09 13:25						
Naphthalene	8270C STD	5.8	0.034	0.094	ug/L	10x	50020	09/10/09 15:12	09/17/09 19:32	
2-Methylnaphthalene	"	6.7	0.0028	0.012	"	1x	"	"	09/15/09 17:17	B
1-Methylnaphthalene	"	14	0.011	0.094	"	10x	"	"	09/17/09 19:32	
Benzo[a]anthracene	"	0.0040	0.0023	0.0094	"	1x	"	"	09/15/09 17:17	J
Acenaphthylene	"	0.25	0.0010	0.0094	"	"	"	"	"	
Anthracene	"	0.26	0.00075	0.0094	"	"	"	"	"	B
Chrysene	"	0.0068	0.0020	0.0094	"	"	"	"	"	J
Acenaphthene	"	1.6	0.00094	0.0094	"	"	"	"	"	B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Fluoranthene	"	0.060	0.0015	0.0094	"	"	"	"	"	B
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluorene	"	2.3	0.0011	0.0094	"	"	"	"	"	B
Pyrene	"	0.074	0.0016	0.0094	"	"	"	"	"	B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Phenanthrene	"	2.0	0.0010	0.0094	"	"	"	"	"	B
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Both

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Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 11:16

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-01 (G-HC1R-090409)		Water		Sampled: 09/04/09 09:00						
Diesel Range Hydrocarbons	NWTPH-Dx	0.992	—	0.240	mg/l	1x	9090104	09/16/09 08:06	09/17/09 01:42	
Heavy Oil Range Hydrocarbons	"	0.637	—	0.481	"	"	"	"	"	
Surrogate(s): 2-FBP		80.0%			50 - 150 %	"			"	
p-Terphenyl-d14		105%			50 - 150 %	"			"	
SSI0032-02 (G-EW3-090409)		Water		Sampled: 09/04/09 11:20						
Diesel Range Hydrocarbons	NWTPH-Dx	1.85	—	0.236	mg/l	1x	9090104	09/16/09 08:06	09/17/09 02:05	
Heavy Oil Range Hydrocarbons	"	1.60	—	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		73.1%			50 - 150 %	"			"	
p-Terphenyl-d14		92.2%			50 - 150 %	"			"	
SSI0032-03RE1 (G-EW4-090409)		Water		Sampled: 09/04/09 13:20						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	0.236	mg/l	1x	9090121	09/18/09 14:11	09/18/09 23:24	
Heavy Oil Range Hydrocarbons	"	ND	—	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		97.9%			50 - 150 %	"			"	
p-Terphenyl-d14		118%			50 - 150 %	"			"	
SSI0032-04 (G-EMW04-090409)		Water		Sampled: 09/04/09 15:35						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	0.236	mg/l	1x	9090104	09/16/09 08:06	09/17/09 02:52	
Heavy Oil Range Hydrocarbons	"	ND	—	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		73.7%			50 - 150 %	"			"	
p-Terphenyl-d14		104%			50 - 150 %	"			"	
SSI0032-05 (G-P101OFF-090409)		Other (L)		Sampled: 09/04/09 17:30						
Diesel Range Hydrocarbons	NWTPH-Dx	201000	—	5660	mg/kg	5x	9090118	09/18/09 06:13	09/18/09 11:42	
Heavy Oil Range Hydrocarbons	"	120000	—	14200	"	"	"	"	"	
Surrogate(s): 2-FBP		158%			50 - 150 %	"			"	Z3
p-Terphenyl-d14		106%			50 - 150 %	"			"	
SSI0032-06 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	0.236	mg/l	1x	9090104	09/16/09 08:06	09/17/09 03:16	
Heavy Oil Range Hydrocarbons	"	ND	—	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		69.9%			50 - 150 %	"			"	
p-Terphenyl-d14		97.7%			50 - 150 %	"			"	

TestAmerica Spokane

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Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

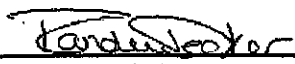
Report Created:
10/28/09 11:16

Semivolatile Petroleum Products by NWTPH-Dx
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-06RE1 (G-GA1-090509)		Water		Sampled: 09/05/09 09:40		H				
Diesel Range Hydrocarbons	NWTPH-Dx	0.352	5	0.236	mg/l	1x	9100094	10/15/09 12:59	10/15/09 17:01	
Heavy Oil Range Hydrocarbons	"	ND	ut	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		76.4%		50 - 150 %	"	"	"	"	"	
p-Terphenyl-d14		78.1%		50 - 150 %	"	"	"	"	"	
SSI0032-07 (G-EMW05-090509)		Water		Sampled: 09/05/09 11:25						
Diesel Range Hydrocarbons	NWTPH-Dx	0.611	---	0.236	mg/l	1x	9090104	09/16/09 08:06	09/17/09 03:39	
Heavy Oil Range Hydrocarbons	"	ND	---	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		75.8%		50 - 150 %	"	"	"	"	"	
p-Terphenyl-d14		102%		50 - 150 %	"	"	"	"	"	
SSI0032-08 (G-EMW06-090509)		Water		Sampled: 09/05/09 13:25						
Diesel Range Hydrocarbons	NWTPH-Dx	0.546	---	0.240	mg/l	1x	9090104	09/16/09 08:06	09/17/09 04:03	
Heavy Oil Range Hydrocarbons	"	ND	---	0.481	"	"	"	"	"	
Surrogate(s): 2-FBP		71.5%		50 - 150 %	"	"	"	"	"	
p-Terphenyl-d14		98.1%		50 - 150 %	"	"	"	"	"	
SSI0032-09 (G-EB-090509)		Water		Sampled: 09/05/09 14:00						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.240	mg/l	1x	9090104	09/16/09 08:06	09/17/09 05:13	
Heavy Oil Range Hydrocarbons	"	ND	---	0.481	"	"	"	"	"	
Surrogate(s): 2-FBP		87.6%		50 - 150 %	"	"	"	"	"	
p-Terphenyl-d14		110%		50 - 150 %	"	"	"	"	"	
SSI0032-10 (G-RSSFP-090509)		Other (L)		Sampled: 09/05/09 15:00						
Diesel Range Hydrocarbons	NWTPH-Dx	233000	---	12000	mg/kg	10x	9090118	09/18/09 06:13	09/18/09 12:06	
Heavy Oil Range Hydrocarbons	"	265000	---	30000	"	"	"	"	"	
Surrogate(s): 2-FBP		73.7%		50 - 150 %	"	"	"	"	"	
p-Terphenyl-d14		89.1%		50 - 150 %	"	"	"	"	"	
SSI0032-11 (G-RS4FP-090509)		Other (L)		Sampled: 09/05/09 16:08						
Diesel Range Hydrocarbons	NWTPH-Dx	386000	---	5880	mg/kg	5x	9090118	09/18/09 06:13	09/18/09 12:06	
Heavy Oil Range Hydrocarbons	"	306000	---	14700	"	"	"	"	"	
Surrogate(s): 2-FBP		161%		50 - 150 %	"	"	"	"	"	Z3
p-Terphenyl-d14		95.0%		50 - 150 %	"	"	"	"	"	

TestAmerica Spokane

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Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Semivolatile Petroleum Products by NWTPH-Dx
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-12 (G-RS3FP-090509)		Other (L)		Sampled: 09/05/09 16:35						
Diesel Range Hydrocarbons	NWTPH-Dx	154000	----	11300	mg/kg	10x	9090118	09/18/09 06:13	09/18/09 12:32	
Heavy Oil Range Hydrocarbons	"	149000	----	28300	"	"	"	"	"	"
Surrogate(s): 2-FBP		132%			50 - 150 %	"			"	
p-Terphenyl-d14		98.6%			50 - 150 %	"			"	
SSI0032-13 (G-RS3aFP-090509)		Other (L)		Sampled: 09/05/09 17:00						
Diesel Range Hydrocarbons	NWTPH-Dx	80700	----	2400	mg/kg	1x	9090118	09/18/09 06:13	09/18/09 12:32	
Heavy Oil Range Hydrocarbons	"	67500	----	6000	"	"	"	"	"	
Surrogate(s): 2-FBP		103%			50 - 150 %	"			"	
p-Terphenyl-d14		107%			50 - 150 %	"			"	
SSI0032-14 (G-RS1SW-090609)		Water		Sampled: 09/06/09 09:45						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	9090104	09/16/09 08:06	09/17/09 05:37	
Heavy Oil Range Hydrocarbons	"	ND	---	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP		72.1%			50 - 150 %	"			"	
p-Terphenyl-d14		92.6%			50 - 150 %	"			"	
SSI0032-15 (G-RS2SW-090609)		Water		Sampled: 09/06/09 10:45						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.260	mg/l	1x	9090104	09/16/09 08:06	09/17/09 06:00	
Heavy Oil Range Hydrocarbons	"	ND	---	0.521	"	"	"	"	"	
Surrogate(s): 2-FBP		80.8%			50 - 150 %	"			"	
p-Terphenyl-d14		103%			50 - 150 %	"			"	
SSI0032-16 (G-RS3SW-090609)		Water		Sampled: 09/06/09 12:00						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.266	mg/l	1x	9090104	09/16/09 08:06	09/17/09 06:24	
Heavy Oil Range Hydrocarbons	"	ND	---	0.532	"	"	"	"	"	
Surrogate(s): 2-FBP		76.9%			50 - 150 %	"			"	
p-Terphenyl-d14		99.6%			50 - 150 %	"			"	
SSI0032-17 (G-RS3DSW-090609)		Water		Sampled: 09/06/09 11:40						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.236	mg/l	1x	9090104	09/16/09 08:06	09/17/09 06:47	
Heavy Oil Range Hydrocarbons	"	ND	---	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP		82.2%			50 - 150 %	"			"	
p-Terphenyl-d14		103%			50 - 150 %	"			"	

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Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 11:16

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0032-19 (G-RS4SW-090609)		Water			Sampled: 09/06/09 13:30					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.248	mg/l	1x	9090104	09/16/09 08:06	09/17/09 07:11	
Heavy Oil Range Hydrocarbons	"	ND	---	0.495	"	"	"	"	"	
Surrogate(s): 2-FBP		73.4%			50 - 150 %		"		"	
p-Terphenyl-d14		96.4%			50 - 150 %		"		"	
SSI0032-20 (G-RS5SW-090609)		Water			Sampled: 09/06/09 14:00					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.240	mg/l	1x	9090104	09/16/09 08:06	09/17/09 07:34	
Heavy Oil Range Hydrocarbons	"	ND	---	0.481	"	"	"	"	"	
Surrogate(s): 2-FBP		78.4%			50 - 150 %		"		"	
p-Terphenyl-d14		103%			50 - 150 %		"		"	
SSI0032-21 (G-RS6SW-090609)		Water			Sampled: 09/06/09 14:50					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.278	mg/l	1x	9090104	09/16/09 08:06	09/17/09 07:58	
Heavy Oil Range Hydrocarbons	"	ND	---	0.556	"	"	"	"	"	
Surrogate(s): 2-FBP		83.9%			50 - 150 %		"		"	
p-Terphenyl-d14		106%			50 - 150 %		"		"	
SSI0032-22 (G-RS7SW-090609)		Water			Sampled: 09/06/09 15:20					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.245	mg/l	1x	9090104	09/16/09 08:06	09/17/09 08:21	
Heavy Oil Range Hydrocarbons	"	ND	---	0.490	"	"	"	"	"	
Surrogate(s): 2-FBP		79.2%			50 - 150 %		"		"	
p-Terphenyl-d14		100%			50 - 150 %		"		"	
SSI0032-23 (G-RS8SW-090609)		Water			Sampled: 09/06/09 16:25					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.240	mg/l	1x	9090104	09/16/09 08:06	09/17/09 09:32	
Heavy Oil Range Hydrocarbons	"	ND	---	0.481	"	"	"	"	"	
Surrogate(s): 2-FBP		77.7%			50 - 150 %		"		"	
p-Terphenyl-d14		101%			50 - 150 %		"		"	

TestAmerica Spokane

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Randee Decker, Project Manager





ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 12, 2010
TO: Steve Hall, Project Manager, E & E, Seattle, Washington
FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*
SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site,
Avery, Idaho**
REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of 5 samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed in accordance with the Tier III and IV Data Validation Summary Checklist (attached). Volatile Organic Compound (VOC; EPA Method 8260), polychlorinated biphenyl (PCB; EPA Method 8082), diesel-range total petroleum hydrocarbons (Method NWTPH-Dx), and semivolatile organic compounds (SVOCs; EPA Method 8270-SIM) analyses were performed by Test America, Spokane Valley, Washington.

The samples were numbered:

G-GA1-21-082609	G-GA3-20-082609	GA-D2-20-082609
G-GA-D-082609	Trip Blank	

See the attached Checklist and associated data results pages provided by Golder Associates for qualified sample results.

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: #SSI0046	
SAMPLES	Collect:	MATRIX	
01 G-GA1-21	8-26-09	SOIL BORINGS	
02 G-GA3-20			
04 GA-D2			
05 G-GA-D			
TRIP Blank	9-08-09	WATER	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA	BNA	Pest / PCB	TPH-Dx	PAH - SIM	OTHER	OTHER
1. Data Completeness	O	✓	O	O	O		
2. Preservation, Holding Times ①	X	✓	O	X	X		
3. GC/MS Tune, Inst. Performance	O		-	-	O		
4. Calibrations	O		O	O	O		
5. Surrogates	O		O	O	O		
6. Internal Standards	-		-	-			
7. Lab Blanks, Field Blanks	O		O	O	O		
8. Lab Duplicates, Field Duplicates	O		O	O	O		
9. LCS, Blank Spike, MS/MSD	O		O	O	O		
10. Compound Identification, TICs	O		O	O	O		
11. Result Verification, D.Limits	O		O	O	O		
12. Overall Summary	O		O	O	O		

O = Data had no problems

Θ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or U)].

M = Data qualified due to major problems [typically more than 50% qualified (J/U)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Hold times out for VOA, TPH-Dx & PAH for all samples. Results qualified (J/U). All dates are just one day past recommended hold time.

Confirmed
1-20-2010

① Cite new SW-846, Third Edition Update IV, Chapter 4, Section 4.1, Table 4-1.

Validated by:

Reviewed by:

Date: Nov. 10, 2009

Date:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable:

YES ☒ NO ☐

1. Date Package Completeness (Check if present).....

☒ Case narrative
☒ Chain of Custody
☒ Sample Results
☒ Detection Limits
☒ GC/MS Tuning
☒ Initial Calibration
☒ Continuing Calib.

☒ Blank Results
☒ Surrogate Results
☐ Internal Standards
☒ MS/MSD, LCS Results
☒ Preparation Logs
☒ Analysis Run Logs
☒ Raw Data
☐ Other

☐ Acceptable
☒ Absent
☐ Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply).....

☐



☐ Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection

☐ BNA samples extracted within 7 days (14 day soil) of collection

☐ BNA extracts analyzed within 40 days of collection

☒ Pest/PCBs samples extracted within 7 days (14 day soil) of collection - NO QUAL.

☐ Pest/PCBs extracts analyzed within 40 days of collection

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results: _____

⊗ TPH-Dx - 15 Days assoc. results J/UR

PCB - No Qual. 26 Days

⊗ PAHs - 15 Days assoc. Qual J/UR

⊗ VOA - 17 Days " " J/UR

3. GC Instrument Tune, Performance Check

☒

☐

☒ GC/MS Tuning performed

☐ GC/MS Tuning within control limits

☐ GC/MS Tuning out of control limits, (qualify R/UR)

☐ Res Chk Mix, MidPoint AB <60%, (J for detects, UR other)

☐ PEM resolution <90% adj pks, (J for detects, UR other)

☐ DDT, Endrin breakdown >20%, (J for DDD, DDT, Endrin,

Endrin Aldehyde, Endrin Ketone, or NJ/R)

☐ Res Check Mix, MidPoint AB, TCMX, DCBP within RT windows from ICAL AB mixture (Fix or R/UR)

Comments/Qualified Results: _____

VOA 9/24, RRF # R², CCAL

PCB 9/16, RRF # R², CCAL

PAHs 9/13, Tune, RRF # RSD, R²

TPH-Dx 9/11, RRF

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☐

4. Initial & Continuing Calibration (Check all that apply)..... ☒ ☐

- GC/MS Data: ☐ ICal RRFs > 0.05 all cmpnds (If no, J/UR), [>0.01 for Poor Performers] VOA, SVOA
☐ ICal RSD of RRF < 30% all cmpnds (If no, J detects) [$<50\%$ for Poor Performers] VOA
☐ ICal RSD of RRF < 20.5% all cmpnds (If no, J detects) [$<50\%$ or $*30\%$ for Poor Performers] SVOA
 Note: *Applies to 2,4-DNT, 2-Nitrophenol, and 2,4-DMP only [SVOA].
☐ Continue Cal. $\pm 30\%$ Diff of RRF (If no, J/UJ) [$\pm 50\%$ Diff, Poor Performers] VOA, SVOA
☐ Continue Cal. %D < 25% all cmpnds (If no, J/UJ), VOA, SVOA
 Pesticide/PCB: ☐ RSD < 10% for performance checks (If no J detects)
☐ Stnds analyzed prior to analysis, & at proper frequency
☐ Continuing Cal. % Diff. < 15% for quant. ($<20\%$ for confirm column)

See section (3). ICal & COAL

5. Surrogates (Check all that apply)..... ☒ ☐

- ☒ Surrogates analyzed
☒ Recoveries within Method Control (lab) limits (VOA: 80 - 120%, SVOA: Lab Established, PEST: 30-150%)
☐ Recoveries above Method Control limits (J detects only)
☐ Recoveries below Method Control limits but > 20% (J/UJ)
☐ Recoveries below 20%, 10% for PEST (J/UR for VOA, J/ UJ or UR for SVOA, J/UR for PEST)

Comments/Qualified Results

TPH-Dx ✓

PCB ✓

PAHs ✓

VOA - Trip Blank ✓

6. Internal Standards Performance..... ☐ ☐

- ☐ Internal standards added to all QC and samples
☐ Internal standards areas within Control Limits* [$\pm 40\%$ VOA, $\pm 50\%$ SVOA]*
 *Associated with 12 Hour CCV Std.
☐ Internal standards out of Control limits but > 10% (J/UJ)
☐ Internal standards zero or < 10% of Control limits (J/UR)
☐ Internal standards RTs within ± 20 sec window (If no, J/UJ)

Comments/Qualified Results:

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☐

7. Laboratory Blanks, Field Blanks (Check all that apply).....



- ☐ Method Blanks, Prep. Blanks analyzed after Cal Stnds and every 12 hours
☐ Method Blank Common Lab Contaminants, list: MeCl₂, Cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart
☐ Other Contaminants: Qualify results (< 5X RL) according to Chart below.
☐ Instrument blanks after all high level samples, All cmpnds must be <RL

Comments/Qualified Results:

Examples:

MDL	BLANK		SAMPLE		Q
	Result	PQL	Result	Applied	
0.3	0.45	1.0	0.8	1.0	U
0.3	0.99	1.0	1.8	1.8	J
0.3	1.5	1.0	1.1	1.5	U
0.3	1.5	1.0	1.8	1.8	J
0.3	0	1.0	0.85	0.85	J
0.3	0	1.0	1.8	1.8	

NOA on Trip Blank =
MB50920 ✓ All ND.

PAHs MB0060 ✓

PCB MB0142 ✓

TPH-Dx MB0070 ✓

8. Duplicate, Field Duplicates (Check all that apply).....



- ☐ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
☐ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
☐ Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results

PAHs #0060 on MS/MSD non-assoc. ✓

PCB - MS/MSD RPD ✓

TPH-Dx ✓ non-assoc. Smpl.

9. MS/MSD, Lab Control Samples, Blank Spikes (Check all that apply)....



- ☒ LCS %R 80-120%
☒ LCS %R 50-79% or >120%, results >IDL estimated (J)
☐ LCS %R 50-79% and results <IDL estimated (UJ)
☐ LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: NOA LCS recovery: 120% Properly assoc.
detect qualif. (J) No Qual - No detect.

PAHs - 0060-BSI ✓ MS/MSD non-assoc. Smpl. ✓

PCBs #0142 LCS ✓ MS/MSD on Smpl. 05 ✓ for A 1016, 1260.

TPH-Dx #0070 LCS ✓ MS sample non-assoc. ✓

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

10. Compound Identification, TICs..... ☒ ☐

Comments/Qualified Results: _____

11. Result Verification, Detection Limits ☒ ☐

- ☐ All results supported in raw data
☐ Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: _____

12. Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 13:08

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-01 (G-GA1-21-082609)		Soil								H8
								Sampled: 08/26/09 15:15		
Diesel Range Hydrocarbons	NWTPH-Dx	37.1	J	11.2	mg/kg dry	1x	9090070	09/10/09 14:30	09/13/09 18:59	
Heavy Oil Range Hydrocarbons	"	73.0	J	28.1	"	"	"	"	"	
Surrogate(s): 2-FBP		96.9%			50 - 150 %	"			"	
p-Terphenyl-d14		119%			50 - 150 %	"			"	
SSI0046-03 (G-GA3-20-082608)		Soil								H8
								Sampled: 08/26/09 10:00		
Diesel Range Hydrocarbons	NWTPH-Dx	22.9	J	11.4	mg/kg dry	1x	9090070	09/10/09 14:30	09/16/09 20:59	
Heavy Oil Range Hydrocarbons	"	70.7	J	28.5	"	"	"	"	"	
Surrogate(s): 2-FBP		93.0%			50 - 150 %	"			"	
p-Terphenyl-d14		125%			50 - 150 %	"			"	
SSI0046-04 (GA-D2-082609)		Soil								H8
								Sampled: 08/26/09 10:00		
Diesel Range Hydrocarbons	NWTPH-Dx	39.4	J	11.3	mg/kg dry	1x	9090070	09/10/09 14:30	09/16/09 21:23	
Heavy Oil Range Hydrocarbons	"	119	J	28.2	"	"	"	"	"	
Surrogate(s): 2-FBP		95.2%			50 - 150 %	"			"	
p-Terphenyl-d14		123%			50 - 150 %	"			"	
SSI0046-05 (G-GA-D-082609)		Soil								H8
								Sampled: 08/26/09 15:15		
Diesel Range Hydrocarbons	NWTPH-Dx	50.1	J	11.2	mg/kg dry	1x	9090070	09/10/09 14:30	09/16/09 21:46	
Heavy Oil Range Hydrocarbons	"	88.1	J	28.1	"	"	"	"	"	
Surrogate(s): 2-FBP		87.1%			50 - 150 %	"			"	
p-Terphenyl-d14		111%			50 - 150 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 13:08

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-01	(G-GA1-21-082609)	Soil			Sampled: 08/26/09 15:15					
PCB-1016	EPA 8082	ND	---	9.89	ug/kg dry	1x	9090142	09/21/09 14:51	09/24/09 09:18	
PCB-1221	"	ND	---	9.89	"	"	"	"	"	
PCB-1232	"	ND	---	9.89	"	"	"	"	"	
PCB-1242	"	ND	---	9.89	"	"	"	"	"	
PCB-1248	"	ND	---	9.89	"	"	"	"	"	
PCB-1254	"	ND	---	9.89	"	"	"	"	"	
PCB-1260	"	ND	---	9.89	"	"	"	"	"	
Surrogate(s): TCX		89.0%		27.9 - 154 %		"		"		
Decachlorobiphenyl		71.7%		35 - 157 %		"		"		
SSI0046-03	(G-GA3-20-082608)	Soil			Sampled: 08/26/09 10:00					
PCB-1016	EPA 8082	ND	---	9.59	ug/kg dry	1x	9090142	09/21/09 14:51	09/24/09 09:41	
PCB-1221	"	ND	---	9.59	"	"	"	"	"	
PCB-1232	"	ND	---	9.59	"	"	"	"	"	
PCB-1242	"	ND	---	9.59	"	"	"	"	"	
PCB-1248	"	ND	---	9.59	"	"	"	"	"	
PCB-1254	"	ND	---	9.59	"	"	"	"	"	
PCB-1260	"	ND	---	9.59	"	"	"	"	"	
Surrogate(s): TCX		95.7%		27.9 - 154 %		"		"		
Decachlorobiphenyl		73.0%		35 - 157 %		"		"		
SSI0046-04	(GA-D2-082609)	Soil			Sampled: 08/26/09 10:00					
PCB-1016	EPA 8082	ND	---	9.93	ug/kg dry	1x	9090142	09/21/09 14:51	09/24/09 10:03	
PCB-1221	"	ND	---	9.93	"	"	"	"	"	
PCB-1232	"	ND	---	9.93	"	"	"	"	"	
PCB-1242	"	ND	---	9.93	"	"	"	"	"	
PCB-1248	"	ND	---	9.93	"	"	"	"	"	
PCB-1254	"	ND	---	9.93	"	"	"	"	"	
PCB-1260	"	ND	---	9.93	"	"	"	"	"	
Surrogate(s): TCX		88.4%		27.9 - 154 %		"		"		
Decachlorobiphenyl		71.1%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 13:08

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-05 (G-GA-D-082609)		Soil						Sampled: 08/26/09 15:15		
PCB-1016	EPA 8082	ND	—	9.89	ug/kg dry	1x	9090142	09/21/09 14:51	09/24/09 10:26	
PCB-1221	"	ND	—	9.89	"	"	"	"	"	
PCB-1232	"	ND	—	9.89	"	"	"	"	"	
PCB-1242	"	ND	—	9.89	"	"	"	"	"	
PCB-1248	"	ND	—	9.89	"	"	"	"	"	
PCB-1254	"	ND	—	9.89	"	"	"	"	"	
PCB-1260	"	ND	—	9.89	"	"	"	"	"	
Surrogate(s): TCX		68.0%		27.9 - 154 %	"	-			"	
Decachlorobiphenyl		60.5%		35 - 157 %	"	-			"	

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 13:08

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-01 (G-GA1-21-082609)		Soil Q					Sampled: 08/26/09 15:15			H8
1-Methylnaphthalene	EPA 8270 mod.	ND	0.00449	mg/kg dry	1x	9090060	09/10/09 09:59	09/13/09 20:34		
2-Methylnaphthalene	"	ND	0.00449	"	"	"	"	"		
Acenaphthene	"	ND	0.00449	"	"	"	"	"		
Acenaphthylene	"	ND	0.00449	"	"	"	"	"		
Anthracene	"	0.00499	0.00449	"	"	"	"	"		
Benzo (a) anthracene	"	ND	0.00449	"	"	"	"	"		
Benzo (a) pyrene	"	ND	0.00449	"	"	"	"	"		
Benzo (b) fluoranthene	"	ND	0.00449	"	"	"	"	"		
Benzo (ghi) perylene	"	ND	0.00449	"	"	"	"	"		
Benzo (k) fluoranthene	"	ND	0.00449	"	"	"	"	"		
Chrysene	"	ND	0.00449	"	"	"	"	"		
Dibenzo (a,h) anthracene	"	ND	0.00449	"	"	"	"	"		
Fluoranthene	"	ND	0.00449	"	"	"	"	"		
Fluorene	"	0.00499	0.00449	"	"	"	"	"		
Indeno (1,2,3-cd) pyrene	"	ND	0.00449	"	"	"	"	"		
Naphthalene	"	ND	0.00449	"	"	"	"	"		
Phenanthrene	"	ND	0.00449	"	"	"	"	"		
Pyrene	"	ND	0.00449	"	"	"	"	"		
Surrogate(s): Nitrobenzene-d5		76.0%	38.8 - 139 %	"						
2-FBP		84.2%	40 - 132 %	"						
p-Terphenyl-d14		98.6%	31.7 - 179 %	"						

SSI0046-03 (G-GA3-20-082608)		Soil Q					Sampled: 08/26/09 10:00			H8
1-Methylnaphthalene	EPA 8270 mod.	ND	0.00457	mg/kg dry	1x	9090060	09/10/09 09:59	09/13/09 20:12		
2-Methylnaphthalene	"	ND	0.00457	"	"	"	"	"		
Acenaphthene	"	ND	0.00457	"	"	"	"	"		
Acenaphthylene	"	ND	0.00457	"	"	"	"	"		
Anthracene	"	ND	0.00457	"	"	"	"	"		
Benzo (a) anthracene	"	ND	0.00457	"	"	"	"	"		
Benzo (a) pyrene	"	ND	0.00457	"	"	"	"	"		
Benzo (b) fluoranthene	"	ND	0.00457	"	"	"	"	"		
Benzo (ghi) perylene	"	ND	0.00457	"	"	"	"	"		
Benzo (k) fluoranthene	"	ND	0.00457	"	"	"	"	"		
Chrysene	"	ND	0.00457	"	"	"	"	"		
Dibenzo (a,h) anthracene	"	ND	0.00457	"	"	"	"	"		
Fluoranthene	"	ND	0.00457	"	"	"	"	"		
Fluorene	"	ND	0.00457	"	"	"	"	"		
Indeno (1,2,3-cd) pyrene	"	ND	0.00457	"	"	"	"	"		

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 13:08

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-03 (G-GA3-20-082608)		Soil					Sampled: 08/26/09 10:00			H8
Naphthalene	EPA 8270 mod.	ND <i>US</i>	—	0.00457	mg/kg dry	1x	9090060	09/10/09 09:59	09/13/09 20:12	
Phenanthrene	"	ND <i>↓</i>	—	0.00457	"	"	"	"	"	
Pyrene	"	ND <i>↓</i>	—	0.00457	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		71.8%		38.8 - 139 %	"					
2-FBP		74.6%		40 - 132 %	"					
p-Terphenyl-d14		87.4%		31.7 - 179 %	"					

SSI0046-04 (GA-D2-082609)		Soil <i>US</i>					Sampled: 08/26/09 10:00			H8
1-Methylnaphthalene	EPA 8270 mod.	ND <i>US</i>	—	0.00451	mg/kg dry	1x	9090060	09/10/09 09:59	09/13/09 19:51	
2-Methylnaphthalene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Acenaphthene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Acenaphthylene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Anthracene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Benzo (a) anthracene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Benzo (a) pyrene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Benzo (ghi) perylene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Chrysene	"	0.00652 <i>J</i>	—	0.00451	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND <i>US</i>	—	0.00451	"	"	"	"	"	
Fluoranthene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Fluorene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Naphthalene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Phenanthrene	"	ND <i>↓</i>	—	0.00451	"	"	"	"	"	
Pyrene	"	0.00752 <i>J</i>	—	0.00451	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		69.8%		38.8 - 139 %	"					
2-FBP		76.8%		40 - 132 %	"					
p-Terphenyl-d14		87.6%		31.7 - 179 %	"					

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 13:08

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-05 (G-GA-D-082609)		Soil <u>Q</u>					Sampled: 08/26/09 15:15			H8
1-Methylnaphthalene	EPA 8270 mod.	ND <u>UJ</u>	—	0.00449	mg/kg dry	1x	9090060	09/10/09 09:59	09/13/09 19:29	
2-Methylnaphthalene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Acenaphthene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Acenaphthylene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Anthracene	"	0.00749 <u>J</u>	—	0.00449	"	"	"	"	"	
Benzo (a) anthracene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Benzo (a) pyrene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Benzo (ghi) perylene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Chrysene	"	0.00549 <u>J</u>	—	0.00449	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Fluoranthene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Fluorene	"	0.00599 <u>J</u>	—	0.00449	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00449 <u>J</u>	—	0.00449	"	"	"	"	"	
Naphthalene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Phenanthrene	"	ND <u>UJ</u>	—	0.00449	"	"	"	"	"	
Pyrene	"	0.00649 <u>J</u>	—	0.00449	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		58.6%		38.8 - 139 %	"					"
2-FBP		60.4%		40 - 132 %	"					"
p-Terphenyl-d14		104%		31.7 - 179 %	"					"

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Report Created:

10/28/09 13:08


Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-02 (Trip Blank)			Other (S)				Sampled: 09/08/09 00:00			
Dichlorodifluoromethane	8260B STD	ND	4.5	8.0	40	ug/Kg	1x	50920	09/25/09 16:16	09/25/09 22:34 H
Chloromethane	"	ND	60	400	"	"	"	"	"	H
Vinyl chloride	"	ND	1.7	8.0	"	"	"	"	"	H
Bromomethane	"	ND	25	140	"	"	"	"	"	H
Chloroethane	"	ND	23	400	"	"	"	"	"	H
Trichlorofluoromethane	"	ND	5.0	40	"	"	"	"	"	H
1,1-Dichloroethene	"	ND	5.0	20	"	"	"	"	"	H
Methylene Chloride	"	ND	3.8	40	"	"	"	"	"	H
trans-1,2-Dichloroethene	"	ND	3.5	40	"	"	"	"	"	H
1,1-Dichloroethane	"	ND	3.8	40	"	"	"	"	"	H
2,2-Dichloropropane	"	ND	3.7	40	"	"	"	"	"	H
cis-1,2-Dichloroethene	"	ND	2.4	40	"	"	"	"	"	H
Chlorobromomethane	"	ND	12	40	"	"	"	"	"	H
Chloroform	"	ND	2.1	40	"	"	"	"	"	H
1,1,1-Trichloroethane	"	ND	5.0	40	"	"	"	"	"	H
Carbon tetrachloride	"	ND	3.7	20	"	"	"	"	"	H
1,1-Dichloropropene	"	ND	1.8	40	"	"	"	"	"	H
Benzene	"	ND	2.5	16	"	"	"	"	"	H
1,2-Dichloroethane	"	ND	2.2	40	"	"	"	"	"	H
Trichloroethene	"	ND	3.4	16	"	"	"	"	"	H
1,2-Dichloropropane	"	ND	3.9	12	"	"	"	"	"	H, *
Dibromomethane	"	ND	4.0	40	"	"	"	"	"	H
Dichlorobromomethane	"	ND	3.0	40	"	"	"	"	"	H
cis-1,3-Dichloropropene	"	ND	2.4	16	"	"	"	"	"	H
Toluene	"	ND	2.4	40	"	"	"	"	"	H
trans-1,3-Dichloropropene	"	ND	4.0	16	"	"	"	"	"	H
1,1,2-Trichloroethane	"	ND	1.8	12	"	"	"	"	"	H
Tetrachloroethene	"	ND	2.1	20	"	"	"	"	"	H
1,3-Dichloropropane	"	ND	5.0	40	"	"	"	"	"	H
Chlorodibromomethane	"	ND	8.0	40	"	"	"	"	"	H
Ethylene Dibromide	"	ND	3.2	40	"	"	"	"	"	H
Chlorobenzene	"	ND	2.3	40	"	"	"	"	"	H
Ethylbenzene	"	ND	3.7	40	"	"	"	"	"	H
1,1,1,2-Tetrachloroethane	"	ND	4.8	40	"	"	"	"	"	H
1,1,2,2-Tetrachloroethane	"	ND	3.3	10	"	"	"	"	"	H
m-Xylene & p-Xylene	"	ND	7.8	40	"	"	"	"	"	H
o-Xylene	"	ND	2.3	40	"	"	"	"	"	H
Styrene	"	ND	3.8	40	"	"	"	"	"	H

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.


Rande Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 13:08

Volatile Organic Compounds (GC/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0046-02 (Trip Blank)		Other (S) Sampled: 09/08/09 00:00								
Bromoform	8260B STD	ND	11	40	ug/Kg	1x	50920	09/25/09 16:16	09/25/09 22:34	H
Isopropylbenzene	"	ND	1.8	40	"	"	"	"	"	H
Bromobenzene	"	ND	2.7	40	"	"	"	"	"	H
N-Propylbenzene	"	ND	2.8	40	"	"	"	"	"	H
1,2,3-Trichloropropane	"	ND	12	40	"	"	"	"	"	H
2-Chlorotoluene	"	ND	5.4	40	"	"	"	"	"	H
1,3,5-Trimethylbenzene	"	ND	4.2	40	"	"	"	"	"	H
4-Chlorotoluene	"	ND	13	40	"	"	"	"	"	H
tert-Butylbenzene	"	ND	3.2	40	"	"	"	"	"	H
1,2,4-Trimethylbenzene	"	ND	2.1	40	"	"	"	"	"	H
sec-Butylbenzene	"	ND	5.0	40	"	"	"	"	"	H
1,3-Dichlorobenzene	"	ND	5.0	40	"	"	"	"	"	H
4-Isopropyltoluene	"	ND	2.8	40	"	"	"	"	"	H
1,4-Dichlorobenzene	"	ND	5.0	40	"	"	"	"	"	H
n-Butylbenzene	"	ND	7.3	40	"	"	"	"	"	H
1,2-Dichlorobenzene	"	ND	2.6	40	"	"	"	"	"	H
1,2-Dibromo-3-Chloropropane	"	ND	66	200	"	"	"	"	"	H
1,2,4-Trichlorobenzene	"	ND	5.0	40	"	"	"	"	"	H
1,2,3-Trichlorobenzene	"	ND	5.0	40	"	"	"	"	"	H
Hexachlorobutadiene	"	ND	5.6	40	"	"	"	"	"	H
Naphthalene	"	ND	6.0	40	"	"	"	"	"	H
Surrogate(s): Fluorobenzene (Surr)		102%		75 - 125 %	"					
Toluene-d8 (Surr)		98%		85 - 115 %	"					
Ethylbenzene-d10		102%		75 - 125 %	"					
4-Bromofluorobenzene (Surr)		99%		85 - 120 %	"					
Trifluorotoluene (Surr)		92%		75 - 125 %	"					



ecology and environment, inc.

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MEMORANDUM

DATE: May 12, 2010

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site,
Avery, Idaho**

REF: TDD: 08-05-0006 PAN: 002233.0344.01RA

The data quality assurance review of 18 samples collected from the Avery Landing site in Avery, Idaho, was performed by Golder Associates, Inc., Redmond, Washington. The validation was performed in accordance with the Tier III and IV Data Validation Summary Checklist (attached). Target analyte list (TAL) metals (EPA Methods 6010, 6020, and 7471), volatile organic compound (VOC; EPA Method 8260), polychlorinated biphenyl (PCB; EPA Method 8082), diesel-range total petroleum hydrocarbons (Method NWTPH-Dx), and semivolatile organic compounds (SVOCs; EPA Methods 8270 and 8270 and 8270-SIM) analyses were performed by Test America, Spokane Valley and Tacoma, Washington.

The samples were numbered:

GRS-1SED-4-090709	GRS-1SED-0-090709	GRS-8SED-3-090709	GRS-8SED-0-090709
GRS-7SED-0-090709	GRS-7SED-4-090709	GRS-2SED-3-090709	GRS-2SED-0-090709
GRS-5SED-0-090809	GRS-5DSED-0-090809	GRS-5SED-4-090709	GRS-6SED-0-090709
GRS-6SED-3-090709	GRS-3SED-4-090709	GRS-3SED-0-090709	GRS-4SED-0-090709
GRS-4SED-4-090709	G-EB-090709		

See the attached Checklists and associated data results pages provided by Golder Associates for qualified sample results.

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05		SITE: Avery Landing/ POTLATCH / Idaho	
LABORATORY: Test America		SDG: SSI0049	
SAMPLES	GRS-1SED-4	GRS-3SED-4	MATRIX
	GRS-1SED-0	-3SED-0	SEDIMENT
	-8SED-3	-4SED-0	
	-8SED-0	-4SED-4	
	-7SED-0		
	-7SED-4		
	-2SED-3		
	-2SED-0		
	-5SED-0		
	-5DSED-0		
	-5SED-4		
	-6SED-0		
	-6SED-3		

G-EB-090709 WATER

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES 6010	ICP/ MS 6020	Hg/ Se 7470	CN	Anions	OTHER %Moisture
1. Data Completeness	O	O	O			O
2. Holding Times	O	O	O			O
3. Calibration	O	O	O			O
4. Blanks	O	O	O			O
5. Lab Duplicate, Field Duplicate RPD	O	O	O			O
6. LCS, Blank Spike, MFS	O	O	O			O
7. Matrix Spike, MSD	O	O	O			O
8. GFAA, MSA <u>Serial Dil.</u>	O	O	O			O
9. Detection Limits, Other QC	O	O	O			O
10. Data Verification, Overall Summary	O	O	O			O

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① Cd, Se, Th detected in Lab prep blank qualifies associated detects (ALL SAMPLES) as U non-detect (ALL SOILS).
 ② Water Sample G-EB090709 qualif. 'J' for V due to 1 RPD.
 ③ Serial dilution out for Fe in Soil #13: Assoc. result qualif. (J)
 ④ Ag screen level above MDL but below RL - No Qualif (advisory only).

Validated by:

Reviewed by:

Date: Nov. 9, 2009

Date:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable:
YES NO

1. Date Package Completeness (Check if present)..... ☒ ☐

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ ICV/CCV Results
- ☒ Blank Results
- ☒ ICP Interference Check Results
- ☒ Spike Recovery Results
- ☒ Duplicate Results
- ☒ LCS Results
- ☒ Standard Addition Results
- ☒ ICP Serial Dilution

- ☒ Instrument Det. Limits
- ☒ ICP Correction Factors
- ☒ ICP Linear Ranges
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ ICP Raw Data
- ☒ GFAA Raw Data
- ☒ Hg Raw Data
- ☒ Cyanide Raw Data
- ☒ Other

/ Acceptable
x Absent
o Not required for
data package
requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)..... ☒ ☐

- ☒ ICP/GFAA metals completed in <6 months from collection
- ☒ Mercury analyzed in <28 days from collection
- ☐ Cyanide completed in 14 days from collection

Comments/Qualified Results: See Summary Table

3. Calibrations (Check all that apply)..... ☒ ☐

- ☒ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
- ☐ ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- ☐ ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- ☐ ICV/CCV %R 80-120% for Hg, results accepted
- ☐ CRDL Check Std %R 70 - 130, (50-150 SbPbTi)

- ☐ ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- ☐ ICV/CCV %R 85-115% for Cyanide, results acceptable
- ☐ ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- ☐ ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: 6010 - ICV/CCV 9/22, 9/23
6020 - ICV/CCV 9/22, 9/23 Hg(7470) - ICV/CCV 9/22, 9/23
CRQL - 6010B

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

4. Blanks (Check all that apply).....

☐



- ☐ Detects reported in ICB/CCB list:
- ☒ Detects in preparation blanks, list: V, Cr
- ☐ Detects in field blanks, list

Qualified as undetected (U) all sample concentrations $\leq 10X$ any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:

6010 ICP-ICB CCB 9/22, 9/23

⊗ 6010 ICP CCB V @ 0.256 $\mu\text{g/L}$ for 9/22 0.453 for 9/23 - MB ZIA

⊗ Hg(7470) - ICB @ 0.035 $\mu\text{g/L}$ on 9/22.

6010 Soil - Fe 1.29 mg/Kg , Mg 0.76 mg/Kg (=MB ZIA), Sb .007, As .058, Cd .0005, Se .036, Th .0014

XIO = Fe 12.9 Mg 7.6 - NO QUAL.
As .58 Cd .005 Th .14
Sb .07 Se .36

5. Duplicates (Check all that apply).....

☐



- ☐ Duplicate RPD $\leq 20\%$ for waters ($\leq 35\%$ for soils) for results $> 5X$ CRDL
- ☐ Duplicate range is within \pm CRDL ($\pm 2X$ CRDL for soils) for results $< 5X$ CRDL
- ☐ Field Duplicate ID

⊗ 6010/6020

Comments/Qualified Results Lab Duplie. #9: V @ 145% result qual.(J).
6010/6020 on sample 13 = NO Quals.

7. Laboratory Control Samples, Blank Spikes (Check all that apply)...

☒

☐

- ☐ LCS %R 80-120%, [50-150% for Ag, Sb]
- ☐ LCS %R 50-79% or $> 120\%$, results $>$ IDL estimated (J)
- ☐ LCS %R 50-79% and results $<$ IDL estimated (UJ)
- ☐ LCS %R $< 50\%$ and all results rejected (R/UR)

ICSA/IC Ag, Cd, Fe, K, Mg.

" / " " " " "

Comments/Qualified Results:

6010 - 22A, 23A, 24A except Na

GOLD WATER - 13A, 14A, 12A

Hg Water - 15A, 16A, 17A ; Hg (SOIL) 22A, 23A, 24A

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

8. Spike Recovery (Check all that apply).....



- ☒ Spike %R with 75-125%
☐ Spike %R 30-74%, >125%, results > IDL est. (J)
☐ Spike %R 30-74% results <IDL estimated (UJ)

- ☐ Spike %R <30%, results <IDL rejected (UR)
☐ Field blanks used for spike analysis
☐ Post digest spk reqd: %R 75-125%, except Ag

Comments/Qualified Results: 6010/6020 Water Sample #9 MS/STD ✓

6010/6020 Soil #13 MS/MSD ✓

9. GFAA Performance, MSA, or Serial Dilutions.....



- ☐ Duplicate injection RSD <20%
☐ Duplicate injection RSD >20%, results > CRDL estimated (J)
☐ Analytical spike %R 85-115%
☐ Analytical spike %R 40-85%, results > IDL estimated (J)
☐ Analytical spike %R 10-40%, results <IDL estimated (UJ)
☐ Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results:

Sec. Dil #9 Water

#13 Soil: Fe @ 14% TUS

10. Detection Limits, Other QC.....



Comments/Qualified Results:

Ag regulatory screen level @ 0.5 mg/kg - Lab MRL (RL)
is ~1.5 mg/kg - No qual.

11. Data Verification and Overall Assessment.....



Comments/Qualified Results:

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-01 (G-RS1SED-4-090709)		Soil		Sampled: 09/07/09 13:50						
Calcium	6010B TMP Dry	1300	1.7	63	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 20:50	
Iron	"	13000	0.53	11	"	"	"	"	"	B
Magnesium	"	3000	0.75	63	"	"	"	"	"	B
Potassium	"	760	18	190	"	"	"	"	"	
Silver	"	ND	0.051	1.1	"	"	"	"	"	
Sodium	"	ND	7.8	110	"	"	"	"	09/23/09 17:33	
SSI0049-02 (G-RS1SED-0-090709)		Soil		Sampled: 09/07/09 13:55						
Calcium	6010B TMP Dry	830	2.1	77	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 20:54	
Iron	"	13000	0.65	14	"	"	"	"	"	B
Magnesium	"	3300	0.93	77	"	"	"	"	"	B
Potassium	"	900	22	230	"	"	"	"	"	
Silver	"	ND	0.063	1.4	"	"	"	"	"	
Sodium	"	ND	9.5	140	"	"	"	"	09/23/09 17:35	
SSI0049-03 (G-RS8SED-3-090709)		Soil		Sampled: 09/07/09 14:45						
Calcium	6010B TMP Dry	1200	1.8	65	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 20:58	
Iron	"	13000	0.54	12	"	"	"	"	"	B
Magnesium	"	3400	0.78	65	"	"	"	"	"	B
Potassium	"	910	19	190	"	"	"	"	"	
Silver	"	ND	0.053	1.2	"	"	"	"	"	
Sodium	"	ND	8.0	120	"	"	"	"	09/23/09 17:37	
SSI0049-04 (G-RS8SED-0-090709)		Soil		Sampled: 09/07/09 14:50						
Calcium	6010B TMP Dry	1100	2.2	81	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:01	
Iron	"	15000	0.67	15	"	"	"	"	"	B
Magnesium	"	4400	0.97	81	"	"	"	"	"	B
Potassium	"	1300	23	240	"	"	"	"	"	
Silver	"	ND	0.066	1.5	"	"	"	"	"	
Sodium	"	ND	10	150	"	"	"	"	09/23/09 17:39	

TestAmerica Spokane

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Randee Decker, Project Manager



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Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP)

TestAmerica Tacoma

Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-05 (G-RS7SED-0-090709)		Soil		Sampled: 09/07/09 15:30						
Calcium	6010B TMP Dry	1200	2.0	74	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:06	
Iron	"	14000	0.62	14	"	"	"	"	"	B
Magnesium	"	4400	0.89	74	"	"	"	"	"	B
Potassium	"	1400	22	220	"	"	"	"	"	
Silver	"	ND	0.061	1.4	"	"	"	"	"	
Sodium	"	ND	9.2	140	"	"	"	"	09/23/09 17:41	*
SSI0049-06 (G-RS7SED-4-090709)		Soil		Sampled: 09/07/09 15:25						
Calcium	6010B TMP Dry	590	1.7	63	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:09	
Iron	"	11000	0.53	11	"	"	"	"	"	B
Magnesium	"	2200	0.76	63	"	"	"	"	"	B
Potassium	"	560	18	190	"	"	"	"	"	
Silver	"	0.053	0.052	1.1	"	"	"	"	"	J
Sodium	"	ND	7.8	110	"	"	"	"	09/23/09 17:44	*
SSI0049-07 (G-RS2SED-3-090709)		Soil		Sampled: 09/07/09 16:15						
Calcium	6010B TMP Dry	2700	1.8	67	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:14	
Iron	"	12000	0.56	12	"	"	"	"	"	B
Magnesium	"	3600	0.81	67	"	"	"	"	"	B
Potassium	"	690	20	200	"	"	"	"	"	
Silver	"	ND	0.055	1.2	"	"	"	"	"	
Sodium	"	ND	8.3	120	"	"	"	"	09/23/09 17:46	*
SSI0049-08 (G-RS2SED-0-090709)		Soil		Sampled: 09/07/09 16:20						
Calcium	6010B TMP Dry	8500	2.0	72	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:19	
Iron	"	14000	0.60	13	"	"	"	"	"	B
Magnesium	"	5300	0.87	72	"	"	"	"	"	B
Potassium	"	1200	21	220	"	"	"	"	"	
Silver	"	ND	0.059	1.3	"	"	"	"	"	
Sodium	"	ND	8.9	130	"	"	"	"	09/23/09 17:48	*



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Metals (ICP)

TestAmerica Tacoma

Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-10 (G-RS5SED-0-090809)		Soil		Sampled: 09/08/09 08:30						
Calcium	6010B TMP Dry	1300	2.1	77	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:23	
Iron	"	16000	0.64	14	"	"	"	"	"	B
Magnesium	"	4100	0.92	77	"	"	"	"	"	B
Potassium	"	1200	22	230	"	"	"	"	"	
Silver	"	ND	0.063	1.4	"	"	"	"	"	
Sodium	"	ND	9.5	140	"	"	"	"	09/23/09 17:51	"
SSI0049-11 (G-RS5DSED-0-090809)		Soil		Sampled: 09/08/09 08:35						
Calcium	6010B TMP Dry	1400	2.0	74	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:26	
Iron	"	16000	0.62	14	"	"	"	"	"	B
Magnesium	"	4100	0.89	74	"	"	"	"	"	B
Potassium	"	1100	22	220	"	"	"	"	"	
Silver	"	ND	0.061	1.4	"	"	"	"	"	
Sodium	"	ND	9.2	140	"	"	"	"	09/23/09 17:53	"
SSI0049-12 (G-RS5SED-4-090809)		Soil		Sampled: 09/08/09 08:45						
Calcium	6010B TMP Dry	970	1.8	65	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:38	
Iron	"	12000	0.55	12	"	"	"	"	"	B
Magnesium	"	2800	0.78	65	"	"	"	"	"	B
Potassium	"	980	19	200	"	"	"	"	"	
Silver	"	ND	0.053	1.2	"	"	"	"	"	
Sodium	"	ND	8.1	120	"	"	"	"	09/23/09 18:01	"
SSI0049-13 (G-RS6SED-0-090809)		Soil		Sampled: 09/08/09 07:40						
Calcium	6010B TMP Dry	1000	1.9	70	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 20:23	
Iron	"	16000	0.58	13	"	"	"	"	"	B
Magnesium	"	4300	0.84	70	"	"	"	"	"	B
Potassium	"	1100	20	210	"	"	"	"	"	
Silver	"	ND	0.057	1.3	"	"	"	"	"	
Sodium	"	ND	8.6	130	"	"	"	"	09/23/09 17:12	"

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-14 (G-RS6SED-3-090809)		Soil		Sampled: 09/08/09 07:35						
Calcium	6010B TMP Dry	890	2.1	78	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:42	
Iron	"	15000	0.65	14	"	"	"	"	"	B
Magnesium	"	4000	0.94	78	"	"	"	"	"	B
Potassium	"	1100	23	230	"	"	"	"	"	
Silver	"	ND	0.064	1.4	"	"	"	"	"	
Sodium	"	ND	9.7	140	"	"	"	"	09/23/09 18:04	*
SSI0049-15 (G-RS3SED-4-090809)		Soil		Sampled: 09/08/09 11:15						
Calcium	6010B TMP Dry	1580	1.7	62	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:46	
Iron	"	16000	0.52	11	"	"	"	"	"	B
Magnesium	"	3000	0.74	62	"	"	"	"	"	B
Potassium	"	880	18	180	"	"	"	"	"	
Silver	"	ND	0.050	1.1	"	"	"	"	"	
Sodium	"	ND	7.6	110	"	"	"	"	09/23/09 18:06	*
SSI0049-16 (G-RS3SED-0-090809)		Soil		Sampled: 09/08/09 11:10						
Calcium	6010B TMP Dry	1400	1.9	71	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:50	
Iron	"	14000	0.59	13	"	"	"	"	"	B
Magnesium	"	3300	0.85	71	"	"	"	"	"	B
Potassium	"	1000	21	210	"	"	"	"	"	
Silver	"	ND	0.058	1.3	"	"	"	"	"	
Sodium	"	ND	8.8	130	"	"	"	"	09/23/09 18:08	*
SSI0049-17 (G-RS4SED-0-090809)		Soil		Sampled: 09/08/09 12:20						
Calcium	6010B TMP Dry	1100	1.8	65	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:54	
Iron	"	13000	0.55	12	"	"	"	"	"	B
Magnesium	"	2800	0.78	65	"	"	"	"	"	B
Potassium	"	750	19	200	"	"	"	"	"	
Silver	"	ND	0.054	1.2	"	"	"	"	"	
Sodium	"	ND	8.1	120	"	"	"	"	09/23/09 18:11	*

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd, Suite 200	Project Number: 073-93312-03	10/28/09 14:26
Redmond, WA 98077	Project Manager: Doug Morell	

Metals (ICP)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-18 (G-RS4SED-4-090809)	Soil	Sampled: 09/08/09 12:25								
Calcium	6010B TMP Dry	850	1.7	63	mg/Kg dry	1x	50667	09/22/09 10:39	09/22/09 21:57	
Iron	"	12000	0.52	11	"	"	"	"	"	B
Magnesium	"	2300	0.75	63	"	"	"	"	"	B
Potassium	"	590	.18	190	"	"	"	"	"	
Silver	"	ND	0.051	1.1	"	"	"	"	"	
Sodium	"	ND	7.7	110	"	"	"	"	09/23/09 18:13	*

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-01	(G-RSISED-4-090709)	Soil		Sampled: 09/07/09 13:50						
Aluminum	6020 TMP Dry	4700	0.34	34	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 13:45	
Arsenic	"	7.3	0.00089	0.23	"	"	"	"	"	J.B
Antimony	"	3.5	0.0075	0.23	"	"	"	"	"	J.B
Barium	"	34	0.0017	0.23	"	"	"	"	"	
Beryllium	"	0.26	0.00079	0.23	"	"	"	"	"	
Cadmium	"	0.061	0.00054	0.23	u	"	"	"	"	J.B
Chromium	"	7.1	0.0046	0.23	"	"	"	"	"	
Cobalt	"	6.4	0.00062	0.23	"	"	"	"	"	
Copper	"	50	0.0037	0.23	"	"	"	"	"	
Lead	"	45	0.0011	0.23	"	"	"	"	"	
Manganese	"	170	0.018	0.57	"	"	"	"	"	
Nickel	"	9.9	0.0042	0.23	"	"	"	"	"	
Selenium	"	0.095	0.0021	0.57	u	"	"	"	"	J.B
Thallium	"	0.076	0.0046	0.46	u	"	"	"	"	J.B
Vanadium	"	14	0.0031	0.23	"	"	"	"	"	
Zinc	"	34	0.017	0.80	"	"	"	"	"	

SSI0049-02	(G-RSISED-0-090709)	Soil		Sampled: 09/07/09 13:55						
Aluminum	6020 TMP Dry	5300	0.42	42	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 13:50	
Arsenic	"	5.8	0.0011	0.28	"	"	"	"	"	J.B
Antimony	"	1.3	0.0093	0.28	"	"	"	"	"	J.B
Barium	"	31	0.0021	0.28	"	"	"	"	"	
Beryllium	"	0.24	0.00097	0.28	"	"	"	"	"	J
Cadmium	"	0.023	0.00066	0.28	u	"	"	"	"	J.B
Chromium	"	6.7	0.0056	0.28	"	"	"	"	"	
Cobalt	"	5.2	0.00076	0.28	"	"	"	"	"	
Copper	"	23	0.0045	0.28	"	"	"	"	"	
Lead	"	18	0.0014	0.28	"	"	"	"	"	
Manganese	"	140	0.022	0.70	"	"	"	"	"	
Nickel	"	9.0	0.0052	0.28	"	"	"	"	"	
Selenium	"	0.048	0.0026	0.70	u	"	"	"	"	J.B
Thallium	"	0.078	0.0056	0.56	u	"	"	"	"	J.B
Vanadium	"	10	0.0038	0.28	"	"	"	"	"	
Zinc	"	26	0.021	0.98	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-07 (G-RS2SED-3-090709)		Soil		Sampled: 09/07/09 16:15						
Aluminum	6020 TMP Dry	4100	0.37	37	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:16	
Arsenic	"	6.2	0.00095	0.24	"	"	"	"	"	B
Antimony	"	5.5	0.0081	0.24	"	"	"	"	"	B
Barium	"	24	0.0018	0.24	"	"	"	"	"	
Beryllium	"	0.16	0.00084	0.24	"	"	"	"	"	J
Cadmium	"	0.0067	0.00057	0.24	"	"	"	"	"	J, B
Chromium	"	5.3	0.0049	0.24	"	"	"	"	"	
Cobalt	"	5.0	0.00066	0.24	"	"	"	"	"	
Copper	"	18	0.0039	0.24	"	"	"	"	"	
Lead	"	24	0.0012	0.24	"	"	"	"	"	
Manganese	"	150	0.020	0.61	"	"	"	"	"	
Nickel	"	8.6	0.0045	0.24	"	"	"	"	"	
Selenium	"	0.11	0.0023	0.61	"	"	"	"	"	J, B
Thallium	"	0.059	0.0040	0.49	"	"	"	"	"	J, B
Vanadium	"	14	0.0033	0.24	"	"	"	"	"	
Zinc	"	22	0.018	0.86	"	"	"	"	"	

SSI0049-08 (G-RS2SED-0-090709)		Soil		Sampled: 09/07/09 16:20						
Aluminum	6020 TMP Dry	6700	0.39	39	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:22	
Arsenic	"	7.6	0.0010	0.26	"	"	"	"	"	B
Antimony	"	1.9	0.0087	0.26	"	"	"	"	"	B
Barium	"	46	0.0020	0.26	"	"	"	"	"	
Beryllium	"	0.29	0.00090	0.26	"	"	"	"	"	
Cadmium	"	0.018	0.00062	0.26	"	"	"	"	"	J, B
Chromium	"	8.2	0.0052	0.26	"	"	"	"	"	
Cobalt	"	7.1	0.00071	0.26	"	"	"	"	"	
Copper	"	58	0.0042	0.26	"	"	"	"	"	
Lead	"	17	0.0013	0.26	"	"	"	"	"	
Manganese	"	260	0.021	0.66	"	"	"	"	"	
Nickel	"	12	0.0049	0.26	"	"	"	"	"	
Selenium	"	0.14	0.0025	0.66	"	"	"	"	"	J, B
Thallium	"	0.096	0.0052	0.52	"	"	"	"	"	J, B
Vanadium	"	16	0.0035	0.26	"	"	"	"	"	
Zinc	"	28	0.020	0.92	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

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Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-16 (G-RS3SED-0-090809)		Soil		Sampled: 09/08/09 11:10						
Aluminum	6020 TMP Dry	5100	0.39	39	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 15:04	
Arsenic	"	10	0.0010	0.26	"	"	"	"	"	B
Antimony	"	2.3	0.0085	0.26	"	"	"	"	"	B
Barium	"	32	0.0019	0.26	"	"	"	"	"	
Beryllium	"	0.26	0.00089	0.26	"	"	"	"	"	
Cadmium	"	0.032	0.00061	0.26	"	"	"	"	"	I, B
Chromium	"	6.2	0.0052	0.26	"	"	"	"	"	
Cobalt	"	6.8	0.00070	0.26	"	"	"	"	"	
Copper	"	17	0.0041	0.26	"	"	"	"	"	
Lead	"	11	0.0013	0.26	"	"	"	"	"	
Manganese	"	170	0.021	0.64	"	"	"	"	"	
Nickel	"	13	0.0048	0.26	"	"	"	"	"	
Selenium	"	0.12	0.0024	0.64	"	"	"	"	"	I, B
Thallium	"	0.075	0.0052	0.52	"	"	"	"	"	I, B
Vanadium	"	15	0.0035	0.26	"	"	"	"	"	
Zinc	"	32	0.019	0.90	"	"	"	"	"	

SSI0049-17 (G-RS4SED-0-090809)		Soil		Sampled: 09/08/09 12:20						
Aluminum	6020 TMP Dry	4600	0.36	36	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 15:09	
Arsenic	"	16	0.00093	0.24	"	"	"	"	"	B
Antimony	"	24	0.0078	0.24	"	"	"	"	"	B
Barium	"	35	0.0018	0.24	"	"	"	"	"	
Beryllium	"	0.24	0.00082	0.24	"	"	"	"	"	J
Cadmium	"	ND	0.00056	0.24	"	"	"	"	"	
Chromium	"	6.1	0.0048	0.24	"	"	"	"	"	
Cobalt	"	6.3	0.00064	0.24	"	"	"	"	"	
Copper	"	23	0.0038	0.24	"	"	"	"	"	
Lead	"	48	0.0012	0.24	"	"	"	"	"	
Manganese	"	91	0.019	0.59	"	"	"	"	"	
Nickel	"	9.2	0.0044	0.24	"	"	"	"	"	
Selenium	"	0.13	0.0022	0.59	"	"	"	"	"	I, B
Thallium	"	0.055	0.0048	0.48	"	"	"	"	"	I, B
Vanadium	"	18	0.0032	0.24	"	"	"	"	"	
Zinc	"	22	0.018	0.83	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-18 (G-RS4SED-4-090809)		Soil		Sampled: 09/08/09 12:25						
Aluminum	6020 TMP Dry	3900	0.34	34	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 15:14	
Arsenic	"	16	0.00089	0.23	"	"	"	"	"	J, B
Antimony	"	1.1	0.0075	0.23	"	"	"	"	"	J, B
Barium	"	24	0.0017	0.23	"	"	"	"	"	
Beryllium	"	0.17	0.00079	0.23	"	"	"	"	"	J
Cadmium	"	0.018	0.00054	0.23	u	"	"	"	"	J, B
Chromium	"	5.0	0.0046	0.23	"	"	"	"	"	
Cobalt	"	4.1	0.00061	0.23	"	"	"	"	"	
Copper	"	17	0.0036	0.23	"	"	"	"	"	
Lead	"	12	0.0011	0.23	"	"	"	"	"	
Manganese	"	180	0.018	0.57	"	"	"	"	"	
Nickel	"	8.9	0.0042	0.23	"	"	"	"	"	
Selenium	"	0.14	0.0021	0.57	u	"	"	"	"	J, B
Thallium	"	0.048	0.0046	0.46	u	"	"	"	"	J, B
Vanadium	"	12	0.0031	0.23	"	"	"	"	"	
Zinc	"	21	0.017	0.80	"	"	"	"	"	

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Metals (ICP/MS) Total Recoverable
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-09 (G-EB-090709)		Water		Sampled: 09/07/09 17:00						
Antimony	6020 Total Recoverable	ND	0.00040	0.0020	mg/L	5x	50762	09/23/09 13:31	09/23/09 22:38	
Arsenic	"	ND	0.00024	0.0020	"	"	"	"	"	
Barium	"	ND	0.00027	0.0060	"	"	"	"	"	
Nickel	"	ND	0.00022	0.0020	"	"	"	"	"	
Beryllium	"	ND	0.00026	0.0020	"	"	"	"	"	
Selenium	"	ND	0.00034	0.0020	"	"	"	"	"	
Cadmium	"	ND	0.00014	0.0020	"	"	"	"	"	
Silver	"	ND	0.00015	0.0020	"	"	"	"	"	
Chromium	"	0.00092	0.00037	0.0020	"	"	"	"	"	J, A, B
Thallium	"	ND	0.000060	0.0040	"	"	"	"	"	
Cobalt	"	ND	0.00016	0.0020	"	"	"	"	"	
Vanadium	"	0.0048	0.00023	0.0020	"	"	"	"	"	J, A
Copper	"	0.00024	0.00015	0.0050	"	"	"	"	"	
Zinc	"	0.0092	0.0020	0.0070	"	"	"	"	"	
Lead	"	ND	0.00017	0.0020	"	"	"	"	"	

11-9-09



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Metals (ICP) Total Recoverable

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-09 (G-EB-090709)		Water		Sampled: 09/07/09 17:00						
Aluminum	6010B Total Recoverable	ND	0.31	0.50	mg/L	1x	50762	09/23/09 13:31	09/23/09 20:20	
Calcium	"	ND	0.028	1.1	"	"	"	"	"	
Iron	"	ND	0.032	0.20	"	"	"	"	"	
Magnesium	"	ND	0.23	1.1	"	"	"	"	"	
Potassium	"	ND	0.41	3.3	"	"	"	"	"	
Sodium	"	ND	0.18	2.0	"	"	"	"	"	
Manganese	"	ND	0.0017	0.020	"	"	"	"	"	



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-10 (G-RSSSED-0-090809)	Soil	Sampled: 09/08/09 08:30								
Aluminum	6020 TMP Dry	6900	0.42	42	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:27	
Arsenic	"	8.5	0.0011	0.28	"	"	"	"	"	B
Antimony	"	1.2	0.0092	0.28	"	"	"	"	"	B
Barium	"	39	0.0021	0.28	"	"	"	"	"	
Beryllium	"	0.28	0.00097	0.28	"	"	"	"	"	J
Cadmium	"	0.0077	0.00066	0.28	u	"	"	"	"	J, B
Chromium	"	7.8	0.0056	0.28	"	"	"	"	"	
Cobalt	"	6.8	0.0076	0.28	"	"	"	"	"	
Copper	"	22	0.0045	0.28	"	"	"	"	"	
Lead	"	13	0.0014	0.28	"	"	"	"	"	
Manganese	"	210	0.022	0.70	"	"	"	"	"	
Nickel	"	12	0.0052	0.28	"	"	"	"	"	
Selenium	"	0.17	0.0026	0.70	u	"	"	"	"	J, B
Thallium	"	0.088	0.0056	0.56	u	"	"	"	"	J, B
Vanadium	"	16	0.0038	0.28	"	"	"	"	"	
Zinc	"	30	0.021	0.98	"	"	"	"	"	

SSI0049-11 (G-RSSSED-0-090809)	Soil	Sampled: 09/08/09 08:35								
Aluminum	6020 TMP Dry	7000	0.41	41	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:32	
Arsenic	"	9.0	0.0011	0.27	"	"	"	"	"	B
Antimony	"	1.0	0.0089	0.27	"	"	"	"	"	B
Barium	"	41	0.0020	0.27	"	"	"	"	"	
Beryllium	"	0.28	0.00093	0.27	"	"	"	"	"	
Cadmium	"	0.0027	0.00064	0.27	u	"	"	"	"	J, B
Chromium	"	7.9	0.0054	0.27	"	"	"	"	"	
Cobalt	"	7.0	0.0073	0.27	"	"	"	"	"	
Copper	"	21	0.0043	0.27	"	"	"	"	"	
Lead	"	14	0.0014	0.27	"	"	"	"	"	
Manganese	"	190	0.022	0.68	"	"	"	"	"	
Nickel	"	11	0.0050	0.27	"	"	"	"	"	
Selenium	"	0.25	0.0025	0.68	u	"	"	"	"	J, B
Thallium	"	0.087	0.0054	0.54	u	"	"	"	"	J, B
Vanadium	"	17	0.0037	0.27	"	"	"	"	"	
Zinc	"	34	0.020	0.95	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-12 (G-RSSED-4-090809)		Soil		Sampled: 09/08/09 08:45						
Aluminum	6020 TMP Dry	5080	0.36	36	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:48	
Arsenic	"	28	0.00093	0.24	"	"	"	"	"	J-B
Antimony	"	8.3	0.0078	0.24	"	"	"	"	"	J-B
Barium	"	37	0.0018	0.24	"	"	"	"	"	
Beryllium	"	0.26	0.00082	0.24	"	"	"	"	"	
Cadmium	"	0.026	0.00056	0.24	u	"	"	"	"	J-B
Chromium	"	7.8	0.0048	0.24	"	"	"	"	"	
Cobalt	"	5.0	0.00064	0.24	"	"	"	"	"	
Copper	"	28	0.0038	0.24	"	"	"	"	"	
Lead	"	23	0.0012	0.24	"	"	"	"	"	
Manganese	"	91	0.019	0.59	"	"	"	"	"	
Nickel	"	8.8	0.0044	0.24	"	"	"	"	"	
Selenium	"	0.12	0.0022	0.59	u	"	"	"	"	J-B
Thallium	"	0.087	0.0048	0.48	u	"	"	"	"	J-B
Vanadium	"	15	0.0032	0.24	"	"	"	"	"	
Zinc	"	70	0.018	0.83	"	"	"	"	"	
SSI0049-13 (G-RSSED-0-090809)		Soil		Sampled: 09/08/09 07:40						
Aluminum	6020 TMP Dry	6900	0.38	38	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 12:57	
Arsenic	"	7.1	0.00099	0.25	"	"	"	"	"	J-B
Antimony	"	0.85	0.0084	0.25	"	"	"	"	"	J-B
Barium	"	36	0.0019	0.25	"	"	"	"	"	
Beryllium	"	0.27	0.00087	0.25	"	"	"	"	"	
Cadmium	"	0.019	0.00060	0.25	u	"	"	"	"	J-B
Chromium	"	7.8	0.0051	0.25	"	"	"	"	"	
Cobalt	"	6.7	0.00068	0.25	"	"	"	"	"	
Copper	"	24	0.0041	0.25	"	"	"	"	"	
Lead	"	14	0.0013	0.25	"	"	"	"	"	
Manganese	"	160	0.020	0.63	"	"	"	"	"	
Nickel	"	12	0.0047	0.25	"	"	"	"	"	
Selenium	"	0.14	0.0024	0.63	u	"	"	"	"	J-B
Thallium	"	0.092	0.0051	0.51	u	"	"	"	"	J-B
Vanadium	"	17	0.0034	0.25	"	"	"	"	"	
Zinc	"	31	0.019	0.89	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-14 (G-RS6SED-3-090809)		Soil		Sampled: 09/08/09 07:35						
Aluminum	6020 TMP Dry	6500	0.43	43	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:53	
Arsenic	"	9.9	0.0011	0.28	"	"	"	"	"	J-B
Antimony	"	0.93	0.0094	0.28	"	"	"	"	"	J-B
Barium	"	49	0.0021	0.28	"	"	"	"	"	
Beryllium	"	0.26	0.00098	0.28	"	"	"	"	"	J
Cadmium	"	0.013	0.00067	0.28	u	"	"	"	"	J-B
Chromium	"	7.1	0.0057	0.28	"	"	"	"	"	
Cobalt	"	7.2	0.00077	0.28	"	"	"	"	"	
Copper	"	22	0.0045	0.28	"	"	"	"	"	
Lead	"	11	0.0014	0.28	"	"	"	"	"	
Manganese	"	160	0.023	0.71	"	"	"	"	"	
Nickel	"	13	0.0053	0.28	"	"	"	"	"	
Selenium	"	0.16	0.0027	0.71	u	"	"	"	"	J-B
Thallium	"	0.092	0.0057	0.57	u	"	"	"	"	J-B
Vanadium	"	15	0.0038	0.28	"	"	"	"	"	
Zinc	"	30	0.021	0.99	"	"	"	"	"	

SSI0049-15 (G-RS3SED-4-090809)		Soil		Sampled: 09/08/09 11:15						
Aluminum	6020 TMP Dry	5000	0.34	34	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:59	
Arsenic	"	9.9	0.00087	0.22	"	"	"	"	"	J-B
Antimony	"	1.3	0.0074	0.22	"	"	"	"	"	J-B
Barium	"	38	0.0017	0.22	"	"	"	"	"	
Beryllium	"	0.24	0.00077	0.22	"	"	"	"	"	
Cadmium	"	0.016	0.00053	0.22	u	"	"	"	"	J-B
Chromium	"	6.2	0.0045	0.22	"	"	"	"	"	
Cobalt	"	8.4	0.00061	0.22	"	"	"	"	"	
Copper	"	23	0.0036	0.22	"	"	"	"	"	
Lead	"	20	0.0011	0.22	"	"	"	"	"	
Manganese	"	420	0.018	0.56	"	"	"	"	"	
Nickel	"	10	0.0041	0.22	"	"	"	"	"	
Selenium	"	0.12	0.0021	0.56	u	"	"	"	"	J-B
Thallium	"	0.069	0.0045	0.45	u	"	"	"	"	J-B
Vanadium	"	17	0.0030	0.22	"	"	"	"	"	
Zinc	"	31	0.017	0.78	"	"	"	"	"	

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-05 (G-RS7SED-0-090709)		Soil		Sampled: 09/07/09 15:30						
Aluminum	6020 TMP Dry	6900	0.41	41	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:06	
Arsenic	"	7.0	0.0011	0.27	"	"	"	"	"	J-B
Antimony	"	0.68	0.0089	0.27	"	"	"	"	"	J-B
Barium	"	38	0.0020	0.27	"	"	"	"	"	
Beryllium	"	0.28	0.00093	0.27	"	"	"	"	"	
Cadmium	"	0.023	0.00063	0.27	u	"	"	"	"	J-B
Chromium	"	7.7	0.0054	0.27	"	"	"	"	"	
Cobalt	"	7.4	0.00073	0.27	"	"	"	"	"	
Copper	"	20	0.0043	0.27	"	"	"	"	"	
Lead	"	8.2	0.0014	0.27	"	"	"	"	"	
Manganese	"	87	0.022	0.68	"	"	"	"	"	
Nickel	"	10	0.0050	0.27	"	"	"	"	"	
Selenium	"	0.11	0.0025	0.68	u	"	"	"	"	J-B
Thallium	"	0.10	0.0054	0.54	u	"	"	"	"	J-B
Vanadium	"	17	0.0036	0.27	"	"	"	"	"	
Zinc	"	31	0.020	0.95	"	"	"	"	"	

SSI0049-06 (G-RS7SED-4-090709)		Soil		Sampled: 09/07/09 15:25						
Aluminum	6020 TMP Dry	3300	0.34	34	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:11	
Arsenic	"	7.5	0.00089	0.23	"	"	"	"	"	J-B
Antimony	"	210	0.0076	0.23	"	"	"	"	"	J-B
Barium	"	16	0.0017	0.23	"	"	"	"	"	
Beryllium	"	0.13	0.00079	0.23	"	"	"	"	"	J
Cadmium	"	ND	0.00054	0.23	"	"	"	"	"	
Chromium	"	5.9	0.0046	0.23	"	"	"	"	"	
Cobalt	"	4.8	0.00062	0.23	"	"	"	"	"	
Copper	"	36	0.0037	0.23	"	"	"	"	"	
Lead	"	600	0.0011	0.23	"	"	"	"	"	
Manganese	"	110	0.018	0.57	"	"	"	"	"	
Nickel	"	7.6	0.0042	0.23	"	"	"	"	"	
Selenium	"	0.085	0.0022	0.57	u	"	"	"	"	J-B
Thallium	"	0.051	0.0046	0.46	u	"	"	"	"	J-B
Vanadium	"	9.6	0.0031	0.23	"	"	"	"	"	
Zinc	"	24	0.017	0.80	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Metals (ICP/MS)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-03 (G-RS8SED-3-090709)		Soil		Sampled: 09/07/09 14:45						
Aluminum	6020 TMP Dry	5400	0.35	35	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 13:55	
Arsenic	"	5.4	0.0092	0.24	"	"	"	"	"	J-B
Antimony	"	0.75	0.0078	0.24	"	"	"	"	"	J-B
Barium	"	27	0.0018	0.24	"	"	"	"	"	
Beryllium	"	0.21	0.0081	0.24	"	"	"	"	"	J
Cadmium	"	0.014	0.0055	0.24	u	"	"	"	"	J-B
Chromium	"	6.3	0.0047	0.24	"	"	"	"	"	
Cobalt	"	7.7	0.0064	0.24	"	"	"	"	"	
Copper	"	18	0.0038	0.24	"	"	"	"	"	
Lead	"	8.2	0.0012	0.24	"	"	"	"	"	
Manganese	"	190	0.019	0.59	"	"	"	"	"	
Nickel	"	9.4	0.0044	0.24	"	"	"	"	"	
Selenium	"	0.12	0.0022	0.59	u	"	"	"	"	J-B
Thallium	"	0.077	0.0047	0.47	u	"	"	"	"	J-B
Vanadium	"	17	0.0032	0.24	"	"	"	"	"	
Zinc	"	24	0.018	0.82	"	"	"	"	"	

SSI0049-04 (G-RS8SED-0-090709)		Soil		Sampled: 09/07/09 14:50						
Aluminum	6020 TMP Dry	7000	0.44	44	mg/Kg dry	10x	50667	09/22/09 10:39	09/22/09 14:00	
Arsenic	"	6.4	0.0011	0.29	"	"	"	"	"	J-B
Antimony	"	0.64	0.0097	0.29	"	"	"	"	"	J-B
Barium	"	37	0.0022	0.29	"	"	"	"	"	
Beryllium	"	0.31	0.0010	0.29	"	"	"	"	"	
Cadmium	"	0.0096	0.0069	0.29	u	"	"	"	"	J-B
Chromium	"	7.8	0.0059	0.29	"	"	"	"	"	
Cobalt	"	7.6	0.0079	0.29	"	"	"	"	"	
Copper	"	21	0.0047	0.29	"	"	"	"	"	
Lead	"	7.7	0.0015	0.29	"	"	"	"	"	
Manganese	"	200	0.023	0.73	"	"	"	"	"	
Nickel	"	11	0.0054	0.29	"	"	"	"	"	
Selenium	"	0.14	0.0028	0.73	u	"	"	"	"	J-B
Thallium	"	0.097	0.0059	0.59	u	"	"	"	"	J-B
Vanadium	"	18	0.0040	0.29	"	"	"	"	"	
Zinc	"	28	0.022	1.0	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-01 (G-RS1SED-4-090709)	Soil	Sampled: 09/07/09 13:50								
Mercury	7471A Dry	0.061	0.0074	0.024	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:28	
SSI0049-02 (G-RS1SED-0-090709)	Soil	Sampled: 09/07/09 13:55								
Mercury	7471A Dry	ND	0.0087	0.028	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:32	
SSI0049-03 (G-RS8SED-3-090709)	Soil	Sampled: 09/07/09 14:45								
Mercury	7471A Dry	ND	0.0070	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:36	
SSI0049-04 (G-RS8SED-0-090709)	Soil	Sampled: 09/07/09 14:50								
Mercury	7471A Dry	0.026	0.0084	0.027	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:40	J
SSI0049-05 (G-RS7SED-0-090709)	Soil	Sampled: 09/07/09 15:30								
Mercury	7471A Dry	ND	0.0082	0.026	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:44	
SSI0049-06 (G-RS7SED-4-090709)	Soil	Sampled: 09/07/09 15:25								
Mercury	7471A Dry	ND	0.0075	0.024	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:49	
SSI0049-07 (G-RS2SED-3-090709)	Soil	Sampled: 09/07/09 16:15								
Mercury	7471A Dry	ND	0.0077	0.024	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:01	
SSI0049-08 (G-RS2SED-0-090709)	Soil	Sampled: 09/07/09 16:20								
Mercury	7471A Dry	0.021	0.0078	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:05	J
SSI0049-09 (G-EB-090709)	Water	Sampled: 09/07/09 17:00								
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50776	09/23/09 15:17	09/23/09 17:35	
SSI0049-10 (G-RS5SED-0-090809)	Soil	Sampled: 09/08/09 08:30								
Mercury	7471A Dry	ND	0.0080	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:10	
SSI0049-11 (G-RS5DSED-0-090809)	Soil	Sampled: 09/08/09 08:35								
Mercury	7471A Dry	ND	0.0081	0.026	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:15	

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc. 18300 NE Union Hill Rd. Suite 200 Redmond, WA 98077	Project Name: Avery Landing Project Number: 073-93312-03 Project Manager: Doug Morell	Report Created: 10/28/09 14:26
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Mercury (CVAA)

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-12 (G-RS5SED-4-090809)		Soil		Sampled: 09/08/09 08:45						
Mercury	7471A Dry	0.013	0.0068	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:19	J
SSI0049-13 (G-RS6SED-0-090809)		Soil		Sampled: 09/08/09 07:40						
Mercury	7471A Dry	0.020	0.0083	0.026	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:11	J
SSI0049-14 (G-RS6SED-3-090809)		Soil		Sampled: 09/08/09 07:35						
Mercury	7471A Dry	ND	0.0080	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:23	
SSI0049-15 (G-RS3SED-4-090809)		Soil		Sampled: 09/08/09 11:15						
Mercury	7471A Dry	0.0099	0.0071	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:27	J
SSI0049-16 (G-RS3SED-0-090809)		Soil		Sampled: 09/08/09 11:10						
Mercury	7471A Dry	0.0085	0.0079	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:32	J
SSI0049-17 (G-RS4SED-0-090809)		Soil		Sampled: 09/08/09 12:20						
Mercury	7471A Dry	ND	0.0071	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:37	
SSI0049-18 (G-RS4SED-4-090809)		Soil		Sampled: 09/08/09 12:25						
Mercury	7471A Dry	0.020	0.0066	0.021	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:41	J

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

GOLDER PROJECT #: 073-93312.05	SITE: Avery Landing/ POTLATCH / Idaho
LABORATORY: Test America	SDG: SS10049
SAMPLES	Collect: MATRIX
See Analyte report 9/07 & 9/08	17 SOIL/SED.
Sheets & Summary page - Attached	2 WATER

DATA ASSESSMENT SUMMARY

REVIEW ITEM	VOA	BNA	Pest / PCB	TPH-Dx	PAHs (Sim)	OTHER	OTHER
1. Data Completeness	○	○	○	○	○		
2. Preservation, Holding Times	X ^①	○	○ ^②	○	X ^③	No Qualif	
3. GC/MS Tune, Inst. Performance	○	○	—	—	○		
4. Calibrations	○	○	○	○	○		
5. Surrogates	X ^③	○	○	○	○		
6. Internal Standards	○	○	—	—	X ^④		
7. Lab Blanks, Field Blanks	X ^④	X ^⑤	○	○	○		
8. Lab Duplicates, Field Duplicates	○	○	○	○	○ ^⑥		
9. LCS, Blank Spike, MS/MSD	○	X ^⑥	○	○	○		
10. Compound Identification, TICs	○	○	○	○	○		
11. Result Verification, D.Limits	○	○	○	○	○		
12. Overall Summary	○	○	○	○	○		

O = Data had no problems

⊖ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].

Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results: ① VOA trip blank analysis out of hold; Qualif.

J/UJ. ② Samples 1-8 out of hold for PCB; Assoc. results qualif.

J/UJ. ③ Surrogates out of limit for VOA Samples. Qual. applied to #8,

#11, #17 (J). ④ VOA preparation (LAB) blanks have multiple detects.

Assoc. results for 1-8 and 10-18 qualified 'U'. (See annotated report

pages). ⑤ SVOA prep. blanks have contamination; Assoc. results

qualified 'U' in samples 3-8 and 10, 11, 13, 14. (See annotated pages).

⑥ Multiple SVOA compounds in LCS below limit; Associated results qualif.

(UJ) in all samples. (See section 9 for analyte list.)

⑦ PAH samples 1-8 tested 1 day past H.L. time. Assoc. results (J/UJ).

⑧ Field dupli GRSS-SED: RAD out of limit select analytes (section 8).

Validated by:

Date: Nov. 7, 2009

Reviewed by:

Date:

⑨ Multiple IS out of limit for PAHs; Assoc. detects (J) non-detects (R).

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable:

1. Data Package Completeness (Check if present).....

YES ☒ NO ☐

- ☒ Case narrative
- ☒ Chain of Custody
- ☒ Sample Results
- ☒ Detection Limits
- ☒ GC/MS Tuning
- ☒ Initial Calibration
- ☒ Continuing Calib.

- ☒ Blank Results
- ☒ Surrogate Results
- ☒ Internal Standards
- ☒ MS/MSD, LCS Results
- ☒ Preparation Logs
- ☒ Analysis Run Logs
- ☒ Raw Data
- ☐ Other

- ☐ Acceptable
- ☒ Absent
- ☐ Not required for data package requested.

Comments/Qualified Results: Error on chain of custody cites SVOA analysis for sample EQUIP Blank (TRIP). NO QUAL.

2. Holding Times (Check all that apply).....

☐ ☒

☒ Unpreserved VOA analyzed in 7 days from collection; Preserved 14 days from collection

☒ BNA samples extracted within 7 days (14 day soil) of collection

☒ BNA extracts analyzed within 40 days of collection

☒ Pest/PCBs samples extracted within 7 days (14 day soil) of collection

☒ Pest/PCBs extracts analyzed within 40 days of collection — 46 Day — No Qual.

Qualify as estimated (J/UJ) all results analyzed past hold time limits, but within 2X of the limit. Outside the 2X limit, qualify detects as (J) and non-detects as (UR).

Comments/Qualified Results: VOA - 14 Days all, except TRIP BLANK -> Assoc. results qual. (J/UJ). SVOA - 14 Day max met, all samples (soil), 7 Day

for Equip Blank. PCB - 7 Day Water Prep. TPH-Dx - 10 Day on water

PCB (soil) - 15 day prep for samples 1-8 Assoc. results qual. (J/UJ). NO Qualif. applied due to SW-846 citation that allows 1 year HOLD TIME for PCBs. 12-16-09; See SW-846 Update IV, Section 4.0 in Chapter 4, Table 4-1.

3. GC Instrument Tune, Performance Check

☒ ☐

☒ GC/MS Tuning performed

☒ GC/MS Tuning within control limits

☐ GC/MS Tuning out of control limits, (qualify R/UR)

Res Chk Mix, MidPoint AB <60%, (J for detects, UR other)

PEM resolution <90% adj pks, (J for detects, UR other)

DDT, Endrin breakdown >20%, (J for DDD, DDT, Endrin, Endrin Aldehyde, Endrin Ketone, or NJ/R)

Res Check Mix, MidPoint AB, TCMX, DCBP within RT windows from ICAL AB mixture (Fix or R/UR)

Comments/Qualified Results:

PAH 9/18, 9/21 ; SVOA 9/19, 9/22 ; VOA 9/14, 9/18, 9/22
PCB - ICAL & CCAL accept.

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes ☒ NO ☒

4. Initial & Continuing Calibration (Check all that apply).....

- GC/MS Data: ☒ ICal RRFs > 0.05 all cmpnds (If no, J/UR), [> 0.01 for Poor Performers] VOA, SVOA
☒ ICal RSD of RRF < 30% all cmpnds (If no, J detects) [
☒ ICal RSD of RRF < 20.5% all cmpnds (If no, J detects) [
 Note: *Applies to 2,4-DNT, 2-Nitrophenol, and 2,4-DMP only [SVOA].
☒ Continue Cal. +/- 30% Diff of RRF (If no, J/UJ) [+/- 50% Diff, Poor Performers] VOA, SVOA
☒ Continue Cal. %D < 25% all cmpnds (If no, J/UJ), VOA, SVOA
 Pesticide/PCB: ☒ RSD < 10% for performance checks (If no J detects)
☒ Stnds analyzed prior to analysis, & at proper frequency
☒ Continuing Cal. % Diff. < 15% for quant. (< 20% for confirm column)

TPH-Dx - Sept. 11-12, LUBE @ 0.998 = 1st, CCAL 3D. (Front Repr columns).
 PAH - Tune 9/18, 9/21, CCAL 2 Rec. & PCB - ICal 9/16, R² = 0.998 for 11/8
 A-1016, A-1260, CCAL 90-110% (Front Repr). SVOA - ICal 2 RSD, CCAL 2D 9/18,
 9/22, TUNE 9/19, 9/22, CCAL 9/18 Pentachl. Phenol 9/22 OK, out of limit Assoc detects
 quatit. (J) 9/18 is Water sampis. No Qual. VOA ICal 9/4 2 RSD, CCAL 9/21:
 tetrachloroethane - No Qualit. 9/22: No TAL out, 9/25.

5. Surrogates (Check all that apply).....

- ☒ - Indicates surrog. are OK.
☒ Surrogates analyzed
☒ Recoveries within Method Control (lab) limits (VOA: 80 - 120%, SVOA: Lab Established, PEST: 30-150%)
☒ Recoveries above Method Control limits (J detects only)
☒ Recoveries below Method Control limits but > 20% (J/UJ)
☒ Recoveries below 20%, 10% for PEST J/UR for VOA, J/ UJ or UR for SVOA, J/UR for PEST.

Comments/Qualified Results: VOA Out of Limit #6, 8, 11, 17; X for Trifluoro-
 toluene for Bromofluorobenzene; Assoc detects (J). SVOA Out of lim:
 #03, 04, 05, 08, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 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627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 204

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

7. Laboratory Blanks, Field Blanks (Check all that apply).....



- ✓ Method Blanks, Prep. Blanks analyzed after Cal Stnds and every 12 hours
- Method Blank Common Lab Contaminants, list: MeCl₂, Cyclohex (<10X RLs); Acetone, 2-butanone (<2X RLs); Chart
- Other Contaminants: Qualify results (< 5X RL) according to Chart below.
- Instrument blanks after all high level samples, All cmpnds must be <RL

G-EB-090709 ; TRIP BLANK are EQUIP BLANKS (FIELD) #s 9 & 19 respect.

Comments/Qualified Results:

BLANK			SAMPLE	
MDL	Result	PQL	Result	Q Applied
0.3	0.45	1.0	0.8	1.0 U
0.3	0.99	1.0	1.8	1.8 J
0.3	1.5	1.0	1.1	1.5 U
0.3	1.5	1.0	1.8	1.8 J
0.3	0	1.0	0.85	0.85 J
0.3	0	1.0	1.8	1.8

VOA #9 Detects: Not Analyz.

#19 Detects: MeCl, 135 TriM. Benz, n-Butyl Benz, 124 Tri Cl Benz, 123 TCB.

SVOA - #9 Naphthal. Acenaphth above RL.

⊗ VOA Samples: 9/21 Detects qualif. 'U' @ RL for Benz, Tol, Xyl, Chl. Benz, 124 TCB, 123 TCB, m-Xyl, 1-Naphthalene. 9/22 detects for Benz, Tol, Cl Benz, 123 TCB.

⊗ SVOA: 9/15 prep detects qualif. 'U' @ RL for Diethyl phth. & Di n Butyl phth.

PCB: 9/14 prep-ND ✓ TPH-Dx-ND ✓ PAH-ND ✓

8. Duplicate, Field Duplicates (Check all that apply).....



- Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
- Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
- Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results: TPH-Dx ✓, PCB ms/msd RPD ✓, PAH-Ideno-pyrene & emms/msd-NoQual.

Sample GR55-SED-0 & GR55D-SED assumed F. Duplic: RPD calc.

VOA ✓ SVOA - Phenanthrene, Fluoranthene & Pyrene exceed precision limits-NOQUALIF. APPLIED (Advisory only). PCB-All ND ✓

⊗ TPH-Dx - All ND ✓

9. MS/MSD, Lab Control Samples, Blank Spikes (Check all that apply)....



- LCS %R 80-120% w/in Lab estab. limits
- LCS %R 50-79% or >120%, results >IDL estimated (J)
- ✓ LCS %R 50-79% and results <IDL estimated (UJ)
- LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: TPH-Dx (Smp. -01) ✓ 76% MS, 82% LCS ✓

PCB - LCS 93 & 105 ✓, ms/msd 92/86% ✓, PAH - LCS ✓, MS/MSD ✓

SVOA - Multiple TAL do not meet Lab estab. limits - No Qualif. Advisory.

⊗ LCS - 1,3DCB, 2-Nitro Phen, Hexa Cl Pentadiene, 2,4-DiN phenol, 2,4-DiN. 2-methylphenol - Assoc. results qualif. (J/UJ).

ORGANIC ANALYTE - Tier III & IV Data Validation Summary Checklist

Acceptable: Yes NO

10. Compound Identification, TICs..... ☒ ☐

Comments/Qualified Results: _____

11. Result Verification, Detection Limits ☒ ☐

☐ All results supported in raw data

☐ Detection Limits appropriate to meet project needs (Review Work Plan, QAPP)

Comments/Qualified Results: SUDA & SVOC/PAH - B@P screen level not met
@ Lab reported RL, MDL ^{met} ~~meets~~ for B@P all results below RL Advisory.
Condition for Lab RL requirement.

12. Overall Assessment..... ☒ ☐

Comments/Qualified Results: _____

Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: Avery Landing

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-01 (G-RS1SED-4-090709)		Soil		Sampled: 09/07/09 13:50						
PCB-1016	EPA 8082	ND	11.5	9.69	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 09:41	
PCB-1221	"	ND	11.5	9.69	"	"	"	"	09/23/09 09:18	
PCB-1232	"	ND	11.5	9.69	"	"	"	"	"	
PCB-1242	"	ND	11.5	9.69	"	"	"	"	"	
PCB-1248	"	ND	11.5	9.69	"	"	"	"	"	
PCB-1254	"	ND	11.5	9.69	"	"	"	"	"	
PCB-1260	"	10.4	11.5	9.69	"	"	"	"	09/23/09 09:41	
Surrogate(s): TCX		61.6%		27.9 - 154 %		"		"		
Decachlorobiphenyl		50.5%		35 - 157 %		"		"		
SSI0049-02 (G-RS1SED-0-090709)		Soil		Sampled: 09/07/09 13:55						
PCB-1016	EPA 8082	ND	11.5	9.68	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 10:11	
PCB-1221	"	ND	11.5	9.68	"	"	"	"	09/23/09 09:41	
PCB-1232	"	ND	11.5	9.68	"	"	"	"	"	
PCB-1242	"	ND	11.5	9.68	"	"	"	"	"	
PCB-1248	"	ND	11.5	9.68	"	"	"	"	"	
PCB-1254	"	ND	11.5	9.68	"	"	"	"	"	
PCB-1260	"	ND	11.5	9.68	"	"	"	"	09/23/09 10:11	
Surrogate(s): TCX		54.9%		27.9 - 154 %		"		"		
Decachlorobiphenyl		51.4%		35 - 157 %		"		"		
SSI0049-03 (G-RS8SED-3-090709)		Soil		Sampled: 09/07/09 14:45						
PCB-1016	EPA 8082	ND	11.5	9.51	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 10:33	
PCB-1221	"	ND	11.5	9.51	"	"	"	"	09/23/09 10:11	
PCB-1232	"	ND	11.5	9.51	"	"	"	"	"	
PCB-1242	"	ND	11.5	9.51	"	"	"	"	"	
PCB-1248	"	ND	11.5	9.51	"	"	"	"	"	
PCB-1254	"	ND	11.5	9.51	"	"	"	"	"	
PCB-1260	"	ND	11.5	9.51	"	"	"	"	09/23/09 10:33	
Surrogate(s): TCX		8.35%		27.9 - 154 %		"		"		
Decachlorobiphenyl		36.5%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-04 (G-RS8SED-0-090709)		Soil		Sampled: 09/07/09 14:50						
PCB-1016	EPA 8082	ND	—	9.99	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 10:56	
PCB-1221		ND	—	9.99	"	"	"	"	09/23/09 10:33	
PCB-1232		ND	—	9.99	"	"	"	"	"	
PCB-1242		ND	—	9.99	"	"	"	"	"	
PCB-1248		ND	—	9.99	"	"	"	"	"	
PCB-1254		ND	—	9.99	"	"	"	"	"	
PCB-1260		ND	—	9.99	"	"	"	"	09/23/09 10:56	
Surrogate(s): TCX		35.8%		27.9 - 154 %		"		"		
Decachlorobiphenyl		41.0%		35 - 157 %		"		"		
SSI0049-05 (G-RS7SED-0-090709)		Soil		Sampled: 09/07/09 15:30						
PCB-1016	EPA 8082	ND	—	9.54	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 11:19	
PCB-1221		ND	—	9.54	"	"	"	"	09/23/09 10:56	
PCB-1232		ND	—	9.54	"	"	"	"	"	
PCB-1242		ND	—	9.54	"	"	"	"	"	
PCB-1248		ND	—	9.54	"	"	"	"	"	
PCB-1254		ND	—	9.54	"	"	"	"	"	
PCB-1260		ND	—	9.54	"	"	"	"	09/23/09 11:19	
Surrogate(s): TCX		41.3%		27.9 - 154 %		"		"		
Decachlorobiphenyl		37.7%		35 - 157 %		"		"		
SSI0049-06 (G-RS7SED-4-090709)		Soil		Sampled: 09/07/09 15:25						
PCB-1016	EPA 8082	ND	—	9.94	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 11:42	
PCB-1221		ND	—	9.94	"	"	"	"	09/23/09 11:19	
PCB-1232		ND	—	9.94	"	"	"	"	"	
PCB-1242		ND	—	9.94	"	"	"	"	"	
PCB-1248		ND	—	9.94	"	"	"	"	"	
PCB-1254		ND	—	9.94	"	"	"	"	"	
PCB-1260		ND	—	9.94	"	"	"	"	09/23/09 11:42	
Surrogate(s): TCX		32.5%		27.9 - 154 %		"		"		
Decachlorobiphenyl		58.2%		35 - 157 %		"		"		

11-06-09

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
SSI0049-07 (G-RS2SED-3-090709)		Soil		Sampled: 09/07/09 16:15						
PCB-1016	EPA 8082	ND	—	9.58	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 12:04	
PCB-1221		ND	—	9.58	"	"	"	"	09/23/09 11:42	
PCB-1232		ND	—	9.58	"	"	"	"	"	
PCB-1242		ND	—	9.58	"	"	"	"	"	
PCB-1248		ND	—	9.58	"	"	"	"	"	
PCB-1254		ND	—	9.58	"	"	"	"	"	
PCB-1260		ND	—	9.58	"	"	"	"	09/23/09 12:04	

Surrogate(s): TCX

Decachlorobiphenyl

39.3%

34.2%

27.9 - 154 %

35 - 157 %

"

"

"

"

Z

SSI0049-08 (G-RS2SED-0-090709)

Soil

Sampled: 09/07/09 16:20

PCB-1016	EPA 8082	ND	—	9.76	ug/kg dry	1x	9090148	09/22/09 15:21	09/23/09 12:27	
PCB-1221		ND	—	9.76	"	"	"	"	09/23/09 12:04	
PCB-1232		ND	—	9.76	"	"	"	"	"	
PCB-1242		ND	—	9.76	"	"	"	"	"	
PCB-1248		ND	—	9.76	"	"	"	"	"	
PCB-1254		ND	—	9.76	"	"	"	"	"	
PCB-1260		ND	—	9.76	"	"	"	"	09/23/09 12:27	

Surrogate(s): TCX

Decachlorobiphenyl

17.5%

26.6%

27.9 - 154 %

35 - 157 %

"

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"

"

Z

Z

SSI0049-10 (G-RS5SED-0-090809)

Soil

Sampled: 09/08/09 08:30

PCB-1016	EPA 8082	ND	—	9.96	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 13:05	
PCB-1221	"	ND	—	9.96	"	"	"	"	"	
PCB-1232	"	ND	—	9.96	"	"	"	"	"	
PCB-1242	"	ND	—	9.96	"	"	"	"	"	
PCB-1248	"	ND	—	9.96	"	"	"	"	"	
PCB-1254	"	ND	—	9.96	"	"	"	"	"	
PCB-1260	"	ND	—	9.96	"	"	"	"	"	

Surrogate(s): TCX

Decachlorobiphenyl

27.5%

35.8%

27.9 - 154 %

35 - 157 %

"

"

"

"

Z

THG 11-06-09

TestAmerica Spokane

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Randee Decker, Project Manager

Goldier Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-11 (G-RS5DSED-0-090809)		Soil		Sampled: 09/08/09 08:35						
PCB-1016	EPA 8082	ND	—	9.99	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 13:28	
PCB-1221	"	ND	—	9.99	"	"	"	"	"	
PCB-1232	"	ND	—	9.99	"	"	"	"	"	
PCB-1242	"	ND	—	9.99	"	"	"	"	"	
PCB-1248	"	ND	—	9.99	"	"	"	"	"	
PCB-1254	"	ND	—	9.99	"	"	"	"	"	
PCB-1260	"	ND	—	9.99	"	"	"	"	"	
Surrogate(s): TCX		65.1%		27.9 - 154 %		"		"		
Decachlorobiphenyl		64.6%		35 - 157 %		"		"		
SSI0049-12 (G-RS5SED-4-090809)		Soil		Sampled: 09/08/09 08:45						
PCB-1016	EPA 8082	ND	—	9.95	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 13:50	
PCB-1221	"	ND	—	9.95	"	"	"	"	"	
PCB-1232	"	ND	—	9.95	"	"	"	"	"	
PCB-1242	"	ND	—	9.95	"	"	"	"	"	
PCB-1248	"	ND	—	9.95	"	"	"	"	"	
PCB-1254	"	ND	—	9.95	"	"	"	"	"	
PCB-1260	"	ND	—	9.95	"	"	"	"	"	
Surrogate(s): TCX		66.8%		27.9 - 154 %		"		"		
Decachlorobiphenyl		64.7%		35 - 157 %		"		"		
SSI0049-13 (G-RS6SED-0-090809)		Soil		Sampled: 09/08/09 07:40						
PCB-1016	EPA 8082	ND	—	9.99	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 14:13	
PCB-1221	"	ND	—	9.99	"	"	"	"	"	
PCB-1232	"	ND	—	9.99	"	"	"	"	"	
PCB-1242	"	ND	—	9.99	"	"	"	"	"	
PCB-1248	"	ND	—	9.99	"	"	"	"	"	
PCB-1254	"	ND	—	9.99	"	"	"	"	"	
PCB-1260	"	ND	—	9.99	"	"	"	"	"	
Surrogate(s): TCX		101%		27.9 - 154 %		"		"		
Decachlorobiphenyl		114%		35 - 157 %		"		"		

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-14 (G-RS6SED-3-090809)		Soil		Sampled: 09/08/09 07:35						
PCB-1016	EPA 8082	ND	----	9.79	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 14:35	
PCB-1221	"	ND	----	9.79	"	"	"	"	"	
PCB-1232	"	ND	----	9.79	"	"	"	"	"	
PCB-1242	"	ND	----	9.79	"	"	"	"	"	
PCB-1248	"	ND	----	9.79	"	"	"	"	"	
PCB-1254	"	ND	----	9.79	"	"	"	"	"	
PCB-1260	"	ND	----	9.79	"	"	"	"	"	
Surrogate(s): TCX		75.6%		27.9 - 154 %		"		"		
Decachlorobiphenyl		68.9%		35 - 157 %		"		"		
SSI0049-15 (G-RS3SED-4-090809)		Soil		Sampled: 09/08/09 11:15						
PCB-1016	EPA 8082	ND	----	9.98	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 14:58	
PCB-1221	"	ND	----	9.98	"	"	"	"	"	
PCB-1232	"	ND	----	9.98	"	"	"	"	"	
PCB-1242	"	ND	----	9.98	"	"	"	"	"	
PCB-1248	"	ND	----	9.98	"	"	"	"	"	
PCB-1254	"	ND	----	9.98	"	"	"	"	"	
PCB-1260	"	ND	----	9.98	"	"	"	"	"	
Surrogate(s): TCX		104%		27.9 - 154 %		"		"		
Decachlorobiphenyl		55.4%		35 - 157 %		"		"		
SSI0049-16 (G-RS3SED-0-090809)		Soil		Sampled: 09/08/09 11:10						
PCB-1016	EPA 8082	ND	----	9.62	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 15:21	
PCB-1221	"	ND	----	9.62	"	"	"	"	"	
PCB-1232	"	ND	----	9.62	"	"	"	"	"	
PCB-1242	"	ND	----	9.62	"	"	"	"	"	
PCB-1248	"	ND	----	9.62	"	"	"	"	"	
PCB-1254	"	ND	----	9.62	"	"	"	"	"	
PCB-1260	"	ND	----	9.62	"	"	"	"	"	
Surrogate(s): TCX		109%		27.9 - 154 %		"		"		
Decachlorobiphenyl		82.0%		35 - 157 %		"		"		

TestAmerica Spokane

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Rande Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-17	(G-RS4SED-0-090809)	Soil			Sampled: 09/08/09 12:20					C7
PCB-1016	EPA 8082	ND	—	9.66	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 17:37	
PCB-1221	"	ND	—	9.66	"	"	"	"	"	
PCB-1232	"	ND	—	9.66	"	"	"	"	"	
PCB-1242	"	ND	—	9.66	"	"	"	"	"	
PCB-1248	"	ND	—	9.66	"	"	"	"	"	
PCB-1254	"	ND	—	9.66	"	"	"	"	"	
PCB-1260	"	ND	—	9.66	"	"	"	"	"	
Surrogate(s): TCX		103%		27.9 - 154 %		"		"		
Decachlorobiphenyl		11.2%		35 - 157 %		"		"		Z
SSI0049-18	(G-RS4SED-4-090809)	Soil			Sampled: 09/08/09 12:25					
PCB-1016	EPA 8082	ND	—	9.55	ug/kg dry	1x	9090148	09/22/09 15:21	09/24/09 15:43	
PCB-1221	"	ND	—	9.55	"	"	"	"	"	
PCB-1232	"	ND	—	9.55	"	"	"	"	"	
PCB-1242	"	ND	—	9.55	"	"	"	"	"	
PCB-1248	"	ND	—	9.55	"	"	"	"	"	
PCB-1254	"	ND	—	9.55	"	"	"	"	"	
PCB-1260	"	ND	—	9.55	"	"	"	"	"	
Surrogate(s): TCX		67.6%		27.9 - 154 %		"		"		
Decachlorobiphenyl		55.6%		35 - 157 %		"		"		

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: • Doug Morell

Report Created:

10/28/09 14:26

Polychlorinated Biphenyls (PCBs) by Gas Chromatogr

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-09 (G-EB-090709)			Water				Sampled: 09/07/09 17:00			
PCB-1016	8082 STD	ND	0.0042	0.047	ug/L	1x	52855	09/14/09 08:57	10/23/09 14:13	
PCB-1221	"	ND	0.0058	0.047	"	"	"	"	"	
PCB-1232	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1242	"	ND	0.0039	0.047	"	"	"	"	"	
PCB-1248	"	ND	0.0067	0.047	"	"	"	"	"	
PCB-1254	"	ND	0.0042	0.047	"	"	"	"	"	
PCB-1260	"	ND	0.0037	0.047	"	"	"	"	"	
Surrogate(s):	Tetrachloro-m-xylene		86%			60 - 150 %	"		"	
	DCB Decachlorobiphenyl		58%			40 - 135 %	"		"	

11-06-09

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL ⁹⁰ units	Dil	Batch	Prepared	Analyzed	Notes	
SSI0049-09 (G-EB-090709)			Water			Sampled: 09/07/09 17:00				
Acenaphthylene	8270C STD	0.0013	0.0010	0.0094	ug/L	1x	50156	09/14/09 09:08	09/18/09 09:28	J
Naphthalene	"	0.014	0.0034	0.0094	"	"	"	"	"	
2-Methylnaphthalene	"	0.0079	0.0028	0.012	"	"	"	"	"	J
Acenaphthene	"	0.018	0.00094	0.0094	"	"	"	"	"	B
1-Methylnaphthalene	"	0.0048	0.0011	0.0094	"	"	"	"	"	J, B
Fluorene	"	0.0026	0.0011	0.0094	"	"	"	"	"	J, B
Chrysene	"	ND	0.0020	0.0094	"	"	"	"	"	
Phenanthrene	"	0.0034	0.0010	0.0094	"	"	"	"	"	J
Anthracene	"	0.0012	0.00075	0.0094	"	"	"	"	"	J, B
Benzo[b]fluoranthene	"	ND	0.0025	0.0094	"	"	"	"	"	
Benzo[k]fluoranthene	"	ND	0.0023	0.0094	"	"	"	"	"	
Fluoranthene	"	0.0026	0.0015	0.0094	"	"	"	"	"	J, B
Benzo[a]pyrene	"	ND	0.0018	0.019	"	"	"	"	"	
Pyrene	"	ND	0.0016	0.0094	"	"	"	"	"	
Benzo[a]anthracene	"	ND	0.0023	0.0094	"	"	"	"	"	
Indeno[1,2,3-cd]pyrene	"	ND	0.0019	0.0094	"	"	"	"	"	
Dibenz[a,h]anthracene	"	ND	0.0017	0.0094	"	"	"	"	"	
Benzo[g,h,i]perylene	"	ND	0.0019	0.0094	"	"	"	"	"	
Surrogate(s): 2-Fluorobiphenyl		71%		50 - 110 %	"			"		
Terphenyl-d14		89%		50 - 135 %	"			"		
Nitrobenzene-d5		80%		40 - 110 %	"			"		

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10049-01 (G-RS1SED-4-090709)		Soil						Sampled: 09/07/09 13:50		
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00850	mg/kg dry	2x	9090116	09/17/09 12:06	09/21/09 22:01	
2-Methylnaphthalene	"	ND	—	0.00850	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00850	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00850	"	"	"	"	"	
Anthracene	"	ND	—	0.00850	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00850	"	"	"	"	"	101
Benzo (a) pyrene	"	ND	—	0.00850	"	"	"	"	"	101
Benzo (b) fluoranthene	"	0.0147	J	0.00850	"	"	"	"	"	101
Benzo (ghi) perylene	"	0.0193	J	0.00850	"	"	"	"	"	101
Benzo (k) fluoranthene	"	ND	—	0.00850	"	"	"	"	"	101
Chrysene	"	0.00907	J	0.00850	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	0.00907	J	0.00850	"	"	"	"	"	101
Fluoranthene	"	ND	—	0.00850	"	"	"	"	"	
Fluorene	"	ND	—	0.00850	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0113	J	0.00850	"	"	"	"	"	101
Naphthalene	"	ND	—	0.00850	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00850	"	"	"	"	"	
Pyrene	"	0.0204	J	0.00850	"	"	"	"	"	101
Surrogate(s): Nitrobenzene-d5		29.2%			38.8 - 139 %	"				Z3
2-FBP		35.6%			40 - 132 %	"				Z3
p-Terphenyl-d14		83.2%			31.7 - 179 %	"				101

SS10049-02 (G-RS1SED-0-090709)		Soil						Sampled: 09/07/09 13:55		
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00494	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 22:50	
2-Methylnaphthalene	"	ND	—	0.00494	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00494	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00494	"	"	"	"	"	
Anthracene	"	ND	—	0.00494	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00494	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00494	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0155	J	0.00494	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00672	J	0.00494	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00494	"	"	"	"	"	
Chrysene	"	0.00941	J	0.00494	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00494	"	"	"	"	"	
Fluoranthene	"	0.00874	J	0.00494	"	"	"	"	"	
Fluorene	"	ND	—	0.00494	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00494	"	"	"	"	"	

TestAmerica Spokane

No Quals.

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-02 (G-RS1SED-0-090709)		Soil		Sampled: 09/07/09 13:55						
Naphthalene	EPA 8270 mod.	ND	—	0.00494	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 22:50	
Phenanthrene	"	ND	—	0.00494	"	"	"	"	"	
Pyrene	"	0.00874	—	0.00494	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		92.2%		38.8 - 139 %	"					"
2-FBP		100%		40 - 132 %	"					"
p-Terphenyl-d14		89.8%		31.7 - 179 %	"					"
SSI0049-03 (G-RS8SED-3-090709)		Soil		Sampled: 09/07/09 14:45						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00417	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 21:24	
2-Methylnaphthalene	"	ND	—	0.00417	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00417	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00417	"	"	"	"	"	
Anthracene	"	ND	—	0.00417	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00417	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00417	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00417	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00417	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00417	"	"	"	"	"	
Chrysene	"	ND	—	0.00417	"	"	"	"	"	
Dibenzo (a,b) anthracene	"	ND	—	0.00417	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00417	"	"	"	"	"	
Fluorene	"	ND	—	0.00417	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00417	"	"	"	"	"	
Naphthalene	"	ND	—	0.00417	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00417	"	"	"	"	"	
Pyrene	"	ND	—	0.00417	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		78.6%		38.8 - 139 %	"					"
2-FBP		87.4%		40 - 132 %	"					"
p-Terphenyl-d14		85.8%		31.7 - 179 %	"					"



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: Avery Landing

Project Number: 073-95312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SS10049-04 (G-RS8SED-0-090709)		Soil		Sampled: 09/07/09 14:50						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00489	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 20:20	
2-Methylnaphthalene	"	ND	—	0.00489	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00489	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00489	"	"	"	"	"	
Anthracene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00489	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00489	"	"	"	"	"	
Chrysene	"	ND	—	0.00489	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00489	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00489	"	"	"	"	"	
Fluorene	"	ND	—	0.00489	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00489	"	"	"	"	"	
Naphthalene	"	ND	—	0.00489	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00489	"	"	"	"	"	
Pyrene	"	ND	—	0.00489	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		77.8%		38.8 - 139 %	"					
2-FBP		78.4%		40 - 132 %	"					
p-Terphenyl-d14		83.6%		31.7 - 179 %	"					

SS10049-05 (G-RS7SED-0-090709)

Soil

Sampled: 09/07/09 15:30

1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00497	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 20:42	
2-Methylnaphthalene	"	ND	—	0.00497	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00497	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00497	"	"	"	"	"	
Anthracene	"	ND	—	0.00497	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00497	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00497	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.00530	—	0.00497	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00497	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00497	"	"	"	"	"	
Chrysene	"	ND	—	0.00497	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00497	"	"	"	"	"	
Fluoranthene	"	0.0139	—	0.00497	"	"	"	"	"	
Fluorene	"	ND	—	0.00497	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00497	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker

Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
SSI0049-05 (G-RS7SED-0-090709)		Soil		Sampled: 09/07/09 15:30						
Naphthalene	EPA 8270 mod.	ND	—	0.00497	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 20:42	
Phenanthrene	"	ND	—	0.00497	"	"	"	"	"	
Pyrene	"	0.0119	—	0.00497	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		83.0%		38.8 - 139 %	"					"
2-FBP		88.0%		40 - 132 %	"					"
p-Terphenyl-d14		84.8%		31.7 - 179 %	"					"

SSI0049-06 (G-RS7SED-4-090709)		Soil		Sampled: 09/07/09 15:25						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00473	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 21:03	
2-Methylnaphthalene	"	ND	—	0.00473	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00473	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00473	"	"	"	"	"	
Anthracene	"	ND	—	0.00473	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00473	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00473	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00473	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00473	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00473	"	"	"	"	"	
Chrysene	"	ND	—	0.00473	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00473	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00473	"	"	"	"	"	
Fluorene	"	ND	—	0.00473	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00473	"	"	"	"	"	
Naphthalene	"	ND	—	0.00473	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00473	"	"	"	"	"	
Pyrene	"	ND	—	0.00473	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		78.2%		38.8 - 139 %	"					"
2-FBP		80.8%		40 - 132 %	"					"
p-Terphenyl-d14		81.0%		31.7 - 179 %	"					"

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-07 (G-RS2SED-3-090709)		Soil		Sampled: 09/07/09 16:15						
1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.00841	mg/kg dry	2x	9090116	09/17/09 12:06	09/21/09 21:18	
2-Methylnaphthalene	"	ND	---	0.00841	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00841	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00841	"	"	"	"	"	
Anthracene	"	ND	---	0.00841	"	"	"	"	"	
Benzo (a) anthracene	"	ND	R	0.00841	"	"	"	"	"	101
Benzo (a) pyrene	"	ND	R	0.00841	"	"	"	"	"	101
Benzo (b) fluoranthene	"	ND	R	0.00841	"	"	"	"	"	101
Benzo (ghi) perylene	"	0.0112	J	0.00841	"	"	"	"	"	101
Benzo (k) fluoranthene	"	ND	R	0.00841	"	"	"	"	"	101
Chrysene	"	ND	R	0.00841	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	0.00897	J	0.00841	"	"	"	"	"	101
Fluoranthene	"	ND	---	0.00841	"	"	"	"	"	
Fluorene	"	ND	---	0.00841	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	R	0.00841	"	"	"	"	"	101
Naphthalene	"	ND	---	0.00841	"	"	"	"	"	
Phenanthrene	"	ND	---	0.00841	"	"	"	"	"	
Pyrene	"	ND	R	0.00841	"	"	"	"	"	101
Surrogate(s): Nitrobenzene-d5		44.8%		38.8 - 139 %	"			"		
2-FBP		48.8%		40 - 132 %	"			"		
p-Terphenyl-d14		90.0%		31.7 - 179 %	"			"		101

SSI0049-08 (G-RS2SED-0-090709)

Soil

Sampled: 09/07/09 16:20

1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.00498	mg/kg dry	1x	9090116	09/17/09 12:06	09/21/09 18:28	
2-Methylnaphthalene	"	ND	---	0.00498	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00498	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00498	"	"	"	"	"	
Anthracene	"	ND	---	0.00498	"	"	"	"	"	
Benzo (a) anthracene	"	ND	---	0.00498	"	"	"	"	"	
Benzo (a) pyrene	"	ND	---	0.00498	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	---	0.00498	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0115	---	0.00498	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00498	"	"	"	"	"	
Chrysene	"	ND	---	0.00498	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00745	---	0.00498	"	"	"	"	"	
Fluoranthene	"	ND	---	0.00498	"	"	"	"	"	
Fluorene	"	ND	---	0.00498	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00881	---	0.00498	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



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18300 NE Union Hill Rd. Suite 200
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Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-08 (G-RS2SED-0-090709)		Soil		Sampled: 09/07/09 16:20						
Naphthalene	EPA 8270 mod.	ND	—	0.00498	mg/kg dry	1x	9090116	09/17/09 12:06	09/21/09 18:28	
Phenanthrene	"	ND	—	0.00498	"	"	"	"	"	
Pyrene	"	ND	—	0.00498	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		47.2%		38.8 - 139 %	"	"	"	"	"	
2-FBP		50.8%		40 - 132 %	"	"	"	"	"	
p-Terphenyl-d14		53.0%		31.7 - 179 %	"	"	"	"	"	
SSI0049-10 (G-RS5SED-0-090809)		Soil		Sampled: 09/08/09 08:30						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00488	mg/kg dry	1x	9090116	09/17/09 12:06	09/19/09 00:36	
2-Methylnaphthalene	"	ND	—	0.00488	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00488	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00488	"	"	"	"	"	
Anthracene	"	ND	—	0.00488	"	"	"	"	"	
Benzo (a) anthracene	"	0.00586	—	0.00488	"	"	"	"	"	
Benzo (a) pyrene	"	0.00521	—	0.00488	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00488	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00586	—	0.00488	"	"	"	"	"	
Benzo (k) fluoranthene	"	0.0104	—	0.00488	"	"	"	"	"	
Chrysene	"	0.00976	—	0.00488	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00488	"	"	"	"	"	
Fluoranthene	"	0.00716	—	0.00488	"	"	"	"	"	
Fluorene	"	ND	—	0.00488	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00488	"	"	"	"	"	
Naphthalene	"	ND	—	0.00488	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00488	"	"	"	"	"	
Pyrene	"	0.0143	—	0.00488	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		84.4%		38.8 - 139 %	"	"	"	"	"	
2-FBP		87.6%		40 - 132 %	"	"	"	"	"	
p-Terphenyl-d14		98.0%		31.7 - 179 %	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-11 (G-RSSSED-0-090809)		Soil		Sampled: 09/08/09 08:35						
1-Methylnaphthalene	EPA 8270 mod.	ND	---	0.00489	mg/kg dry	1x	9090116	09/17/09 12:06	09/21/09 18:49	
2-Methylnaphthalene	"	ND	---	0.00489	"	"	"	"	"	
Acenaphthene	"	ND	---	0.00489	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00489	"	"	"	"	"	
Anthracene	"	ND	---	0.00489	"	"	"	"	"	
Benzo (a) anthracene	"	ND	---	0.00489	"	"	"	"	"	
Benzo (a) pyrene	"	ND	---	0.00489	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.00587	---	0.00489	"	"	"	"	"	
Benzo (ghi) perylene	"	0.00848	---	0.00489	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00489	"	"	"	"	"	
Chrysene	"	ND	---	0.00489	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00522	---	0.00489	"	"	"	"	"	
Fluoranthene	"	ND	---	0.00489	"	"	"	"	"	
Fluorene	"	ND	---	0.00489	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00718	---	0.00489	"	"	"	"	"	
Naphthalene	"	ND	---	0.00489	"	"	"	"	"	
Phenanthrene	"	ND	---	0.00489	"	"	"	"	"	
Pyrene	"	ND	---	0.00489	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		59.4%		38.8 - 139 %	"					
2-FBP		70.0%		40 - 132 %	"					
p-Terphenyl-d14		64.8%		31.7 - 179 %	"					

SSI0049-12 (G-RSSSED-4-090809)		Soil		Sampled: 09/08/09 08:45						
1-Methylnaphthalene	EPA 8270 mod.	0.101	---	0.00498	mg/kg dry	1x	9090116	09/17/09 12:06	09/23/09 17:31	
2-Methylnaphthalene	"	ND	---	0.00498	"	"	"	"	"	
Acenaphthene	"	0.0453	---	0.00498	"	"	"	"	"	
Acenaphthylene	"	ND	---	0.00498	"	"	"	"	"	
Anthracene	"	0.0122	---	0.00498	"	"	"	"	"	
Benzo (a) anthracene	"	0.0326	---	0.00498	"	"	"	"	"	
Benzo (a) pyrene	"	0.0774	---	0.00498	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.143	---	0.00498	"	"	"	"	"	
Benzo (ghi) perylene	"	0.106	---	0.00498	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	---	0.00498	"	"	"	"	"	
Chrysene	"	0.0625	---	0.00498	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.0370	---	0.00498	"	"	"	"	"	
Fluoranthene	"	0.0293	---	0.00498	"	"	"	"	"	
Fluorene	"	0.0840	---	0.00498	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0746	---	0.00498	"	"	"	"	"	
Naphthalene	"	0.0122	---	0.00498	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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SSI0049-12 (G-RS5SED-4-090809) Soil Sampled: 09/08/09 08:45

Phenanthrene	EPA 8270 mod.	0.0802	—	0.00498	mg/kg dry	1x	9090116	09/17/09 12:06	09/23/09 17:31	
Pyrene	"	0.129	—	0.00498	"	"	"	"	"	
Surrogate(s):										
Nitrobenzene-d5		85.8%			38.8 - 139 %	"			"	
2-FBP		96.0%			40 - 132 %	"			"	
p-Terphenyl-d14		119%			31.7 - 179 %	"			"	

SSI0049-13 (G-RS6SED-0-090809) Soil Sampled: 09/08/09 07:40

1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00462	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 22:07	
2-Methylnaphthalene	"	ND	—	0.00462	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00462	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00462	"	"	"	"	"	
Anthracene	"	ND	—	0.00462	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00462	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00462	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00462	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	—	0.00462	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00462	"	"	"	"	"	
Chrysene	"	ND	—	0.00462	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	—	0.00462	"	"	"	"	"	
Fluoranthene	"	0.00616	—	0.00462	"	"	"	"	"	
Fluorene	"	ND	—	0.00462	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	0.00462	"	"	"	"	"	
Naphthalene	"	ND	—	0.00462	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00462	"	"	"	"	"	
Pyrene	"	0.00555	—	0.00462	"	"	"	"	"	
Surrogate(s):										
Nitrobenzene-d5		65.6%			38.8 - 139 %	"			"	
2-FBP		66.8%			40 - 132 %	"			"	
p-Terphenyl-d14		76.2%			31.7 - 179 %	"			"	

SSI0049-14 (G-RS6SED-3-090809) Soil *Q* Sampled: 09/08/09 07:35

1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00499	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 22:28	
2-Methylnaphthalene	"	ND	—	0.00499	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00499	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00499	"	"	"	"	"	
Anthracene	"	ND	—	0.00499	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00499	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00499	"	"	"	"	"	101
Benzo (b) fluoranthene	"	ND	—	0.00499	"	"	"	"	"	101

TestAmerica Spokane

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Randee Decker
Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-14 (G-RS6SED-3-090809)		Soil		Sampled: 09/08/09 07:35						
Benzo (ghi) perylene	EPA 8270 mod.	ND	R	0.00499	mg/kg dry	1x	9090116	09/17/09 12:06	09/18/09 22:28	101
Benzo (k) fluoranthene	"	ND	R	0.00499	"	"	"	"	"	101
Chrysene	"	ND	"	0.00499	"	"	"	"	"	"
Dibenzo (a,h) anthracene	"	ND	R	0.00499	"	"	"	"	"	101
Fluoranthene	"	ND	"	0.00499	"	"	"	"	"	"
Fluorene	"	ND	"	0.00499	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	R	0.00499	"	"	"	"	"	101
Naphthalene	"	ND	"	0.00499	"	"	"	"	"	"
Phenanthrene	"	ND	"	0.00499	"	"	"	"	"	"
Pyrene	"	ND	R	0.00499	"	"	"	"	"	"
Surrogate(s): Nitrobenzene-d5		82.6%		38.8 - 139 %	"					
2-FBP		92.0%		40 - 132 %	"					
p-Terphenyl-d14		83.0%		31.7 - 179 %	"					

SSI0049-15 (G-RS3SED-4-090809)		Soil		Sampled: 09/08/09 11:15						
1-Methylnaphthalene	EPA 8270 mod.	0.0964		0.00831	mg/kg dry	2x	9090116	09/17/09 12:06	09/21/09 21:39	
2-Methylnaphthalene	"	ND		0.00831	"	"	"	"	"	
Acenaphthene	"	0.103		0.00831	"	"	"	"	"	
Acenaphthylene	"	ND		0.00831	"	"	"	"	"	
Anthracene	"	0.128		0.00831	"	"	"	"	"	
Benzo (a) anthracene	"	0.0709	J	0.00831	"	"	"	"	"	101
Benzo (a) pyrene	"	0.0333	J	0.00831	"	"	"	"	"	101
Benzo (b) fluoranthene	"	0.0388	J	0.00831	"	"	"	"	"	101
Benzo (ghi) perylene	"	0.0299	J	0.00831	"	"	"	"	"	101
Benzo (k) fluoranthene	"	ND	R	0.00831	"	"	"	"	"	101
Chrysene	"	0.129	J	0.00831	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	0.0111	J	0.00831	"	"	"	"	"	101
Fluoranthene	"	0.0521		0.00831	"	"	"	"	"	
Fluorene	"	0.0998		0.00831	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0144	J	0.00831	"	"	"	"	"	101
Naphthalene	"	ND		0.00831	"	"	"	"	"	
Phenanthrene	"	0.354		0.00831	"	"	"	"	"	
Pyrene	"	0.440	J	0.00831	"	"	"	"	"	101
Surrogate(s): Nitrobenzene-d5		36.0%		38.8 - 139 %	"					23
2-FBP		42.0%		40 - 132 %	"					
p-Terphenyl-d14		76.4%		31.7 - 179 %	"					101

TestAmerica Spokane

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Randee Decker, Project Manager

Golder Associates, Inc.	Project Name: Avery Landing	Report Created:
18300 NE Union Hill Rd. Suite 200	Project Number: 073-93312-03	10/28/09 14:26
Redmond, WA 98077	Project Manager: Doug Morell	

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-16 (G-RS3SED-0-090809)		Soil						Sampled: 09/08/09 11:10		
1-Methylnaphthalene	EPA 8270 mod.	0.0176	—	0.00471	mg/kg dry	1x	9090116	09/17/09 12:06	09/21/09 20:36	
2-Methylnaphthalene	"	ND	—	0.00471	"	"	"	"	"	
Acenaphthene	"	0.0101	—	0.00471	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00471	"	"	"	"	"	
Anthracene	"	0.00817	—	0.00471	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00471	"	"	"	"	"	101
Benzo (a) pyrene	"	0.0101	—	0.00471	"	"	"	"	"	101
Benzo (b) fluoranthene	"	ND	—	0.00471	"	"	"	"	"	101
Benzo (ghi) perylene	"	0.0277	—	0.00471	"	"	"	"	"	101
Benzo (k) fluoranthene	"	ND	—	0.00471	"	"	"	"	"	101
Chrysene	"	0.0101	—	0.00471	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	0.0151	—	0.00471	"	"	"	"	"	101
Fluoranthene	"	ND	—	0.00471	"	"	"	"	"	
Fluorene	"	0.0151	—	0.00471	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0182	—	0.00471	"	"	"	"	"	101
Naphthalene	"	ND	—	0.00471	"	"	"	"	"	
Phenanthrene	"	0.0214	—	0.00471	"	"	"	"	"	
Pyrene	"	0.0270	—	0.00471	"	"	"	"	"	101
Surrogate(s): Nitrobenzene-d5		60.0%			38.8 - 139 %	"				
2-FBP		62.0%			40 - 132 %	"				
p-Terphenyl-d14		122%			31.7 - 179 %	"				101

SSI0049-17 (G-RS4SED-0-090809)		Soil						Sampled: 09/08/09 12:20		
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00947	mg/kg dry	2x	9090116	09/17/09 12:06	09/19/09 06:40	
2-Methylnaphthalene	"	ND	—	0.00947	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00947	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00947	"	"	"	"	"	
Anthracene	"	ND	—	0.00947	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00947	"	"	"	"	"	101
Benzo (a) pyrene	"	0.0455	—	0.00947	"	"	"	"	"	101
Benzo (b) fluoranthene	"	ND	—	0.00947	"	"	"	"	"	101
Benzo (ghi) perylene	"	0.0101	—	0.00947	"	"	"	"	"	101
Benzo (k) fluoranthene	"	0.0467	—	0.00947	"	"	"	"	"	101
Chrysene	"	0.0455	—	0.00947	"	"	"	"	"	101
Dibenzo (a,h) anthracene	"	0.0152	—	0.00947	"	"	"	"	"	101
Fluoranthene	"	0.0189	—	0.00947	"	"	"	"	"	
Fluorene	"	ND	—	0.00947	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0114	—	0.00947	"	"	"	"	"	101
Naphthalene	"	ND	—	0.00947	"	"	"	"	"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03


Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-17 (G-RS4SED-0-090809)		Soil 		Sampled: 09/08/09 12:20						
Phenanthrene	EPA 8270 mod.	0.0202	—	0.00947	mg/kg dry	2x	9090116	09/17/09 12:06	09/19/09 06:40	
Pyrene	"	0.0960	J	0.00947	"	"	"	"	"	101
Surrogate(s): Nitrobenzene-d5		104%			38.8 - 139 %	"			"	
2-FBP		148%			40 - 132 %	"			"	ZX
p-Terphenyl-d14		319%			31.7 - 179 %	"			"	101, ZX
SSI0049-18 (G-RS4SED-4-090809)		Soil		Sampled: 09/08/09 12:25						
1-Methylnaphthalene	EPA 8270 mod.	ND	—	0.00477	mg/kg dry	1x	9090116	09/17/09 12:06	09/21/09 18:06	
2-Methylnaphthalene	"	ND	—	0.00477	"	"	"	"	"	
Acenaphthene	"	ND	—	0.00477	"	"	"	"	"	
Acenaphthylene	"	ND	—	0.00477	"	"	"	"	"	
Anthracene	"	ND	—	0.00477	"	"	"	"	"	
Benzo (a) anthracene	"	ND	—	0.00477	"	"	"	"	"	
Benzo (a) pyrene	"	ND	—	0.00477	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	—	0.00477	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0101	—	0.00477	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	—	0.00477	"	"	"	"	"	
Chrysene	"	ND	—	0.00477	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	0.00796	—	0.00477	"	"	"	"	"	
Fluoranthene	"	ND	—	0.00477	"	"	"	"	"	
Fluorene	"	ND	—	0.00477	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00849	—	0.00477	"	"	"	"	"	
Naphthalene	"	ND	—	0.00477	"	"	"	"	"	
Phenanthrene	"	ND	—	0.00477	"	"	"	"	"	
Pyrene	"	0.00636	—	0.00477	"	"	"	"	"	
Surrogate(s): Nitrobenzene-d5		45.2%			38.8 - 139 %	"			"	
2-FBP		47.4%			40 - 132 %	"			"	
p-Terphenyl-d14		52.6%			31.7 - 179 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: 073-93312-03

Project Manager: Doug Morell

Report Created:

10/28/09 14:26

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL ^a	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-01 (G-RS1SED-4-090709)		Soil		Sampled: 09/07/09 13:50						
Diesel Range Hydrocarbons	NWTPH-Dx	66.3	----	12.8	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 09:55	
Heavy Oil Range Hydrocarbons	"	464	----	31.9	"	"	"	"	"	
Surrogate(s): 2-FBP		92.2%		50 - 150 %		"		"		
p-Terphenyl-d14		111%		50 - 150 %		"		"		
SSI0049-02 (G-RS1SED-0-090709)		Soil		Sampled: 09/07/09 13:55						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	15.1	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 10:19	
Heavy Oil Range Hydrocarbons	"	89.0	----	37.8	"	"	"	"	"	
Surrogate(s): 2-FBP		80.9%		50 - 150 %		"		"		
p-Terphenyl-d14		99.9%		50 - 150 %		"		"		
SSI0049-03 (G-RS8SED-3-090709)		Soil		Sampled: 09/07/09 14:45						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	12.5	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 10:43	
Heavy Oil Range Hydrocarbons	"	ND	----	31.3	"	"	"	"	"	
Surrogate(s): 2-FBP		78.5%		50 - 150 %		"		"		
p-Terphenyl-d14		100%		50 - 150 %		"		"		
SSI0049-04 (G-RS8SED-0-090709)		Soil		Sampled: 09/07/09 14:50						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	14.7	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 11:06	
Heavy Oil Range Hydrocarbons	"	ND	----	36.7	"	"	"	"	"	
Surrogate(s): 2-FBP		69.8%		50 - 150 %		"		"		
p-Terphenyl-d14		98.7%		50 - 150 %		"		"		
SSI0049-05 (G-RS7SED-0-090709)		Soil		Sampled: 09/07/09 15:30						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	14.9	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 11:30	
Heavy Oil Range Hydrocarbons	"	ND	----	37.3	"	"	"	"	"	
Surrogate(s): 2-FBP		87.9%		50 - 150 %		"		"		
p-Terphenyl-d14		107%		50 - 150 %		"		"		
SSI0049-06 (G-RS7SED-4-090709)		Soil		Sampled: 09/07/09 15:25						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.8	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 11:54	
Heavy Oil Range Hydrocarbons	"	ND	----	29.6	"	"	"	"	"	
Surrogate(s): 2-FBP		81.1%		50 - 150 %		"		"		
p-Terphenyl-d14		102%		50 - 150 %		"		"		

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager



Golder Associates, Inc.

18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**

Project Number: **073-93312-03**

Project Manager: **Doug Morell**

Report Created:

10/28/09 14:26

Semivolatile Petroleum Products by NWTPH-Dx

TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-07 (G-RS2SED-3-090709)		Soil		Sampled: 09/07/09 16:15						
Diesel Range Hydrocarbons	NWTPH-Dx	62.4	---	12.6	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 12:17	
Heavy Oil Range Hydrocarbons	"	272	---	31.5	"	"	"	"	"	
Surrogate(s): 2-FBP		89.2%			50 - 150 %	"				
p-Terphenyl-d14		110%			50 - 150 %	"				
SSI0049-08 (G-RS2SED-0-090709)		Soil		Sampled: 09/07/09 16:20						
Diesel Range Hydrocarbons	NWTPH-Dx	74.3	---	15.2	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 12:41	
Heavy Oil Range Hydrocarbons	"	336	---	38.1	"	"	"	"	"	
Surrogate(s): 2-FBP		90.5%			50 - 150 %	"				
p-Terphenyl-d14		114%			50 - 150 %	"				
SSI0049-09 (G-EB-090709)		Water		Sampled: 09/07/09 17:00						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.245	mg/l	1x	9090094	09/15/09 07:58	09/17/09 03:39	
Heavy Oil Range Hydrocarbons	"	ND	---	0.490	"	"	"	"	"	
Surrogate(s): 2-FBP		71.5%			50 - 150 %	"				
p-Terphenyl-d14		91.7%			50 - 150 %	"				
SSI0049-10 (G-RS5SED-0-090809)		Soil		Sampled: 09/08/09 08:30						
Diesel Range Hydrocarbons	NWTPH-Dx	24.3	---	14.6	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 13:05	
Heavy Oil Range Hydrocarbons	"	112	---	38.6	"	"	"	"	"	
Surrogate(s): 2-FBP		78.6%			50 - 150 %	"				
p-Terphenyl-d14		90.0%			50 - 150 %	"				
SSI0049-11 (G-RS5SED-0-090809)		Soil		Sampled: 09/08/09 08:35						
Diesel Range Hydrocarbons	NWTPH-Dx	36.9	---	14.7	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 09:55	
Heavy Oil Range Hydrocarbons	"	182	---	36.7	"	"	"	"	"	
Surrogate(s): 2-FBP		89.3%			50 - 150 %	"				
p-Terphenyl-d14		124%			50 - 150 %	"				
SSI0049-12 (G-RS5SED-4-090809)		Soil		Sampled: 09/08/09 08:45						
Diesel Range Hydrocarbons	NWTPH-Dx	73.1	---	12.4	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 10:19	
Heavy Oil Range Hydrocarbons	"	178	---	31.1	"	"	"	"	"	
Surrogate(s): 2-FBP		91.3%			50 - 150 %	"				
p-Terphenyl-d14		121%			50 - 150 %	"				

TestAmerica Spokane

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Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**

Report Created:
10/28/09 14:26

Semivolatile Petroleum Products by NWTPH-Dx
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-13 (G-RS6SED-0-090809)		Soil		Sampled: 09/08/09 07:40						
Diesel Range Hydrocarbons	NWTPH-Dx	22.4	—	13.9	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 10:43	
Heavy Oil Range Hydrocarbons	"	140	—	34.7	"	"	"	"	"	
Surrogate(s): 2-FBP		83.8%			50 - 150 %	"			"	
p-Terphenyl-d14		119%			50 - 150 %	"			"	
SSI0049-14 (G-RS6SED-3-090809)		Soil		Sampled: 09/08/09 07:35						
Diesel Range Hydrocarbons	NWTPH-Dx	25.3	—	15.3	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 11:06	
Heavy Oil Range Hydrocarbons	"	126	—	38.2	"	"	"	"	"	
Surrogate(s): 2-FBP		80.6%			50 - 150 %	"			"	
p-Terphenyl-d14		113%			50 - 150 %	"			"	
SSI0049-15 (G-RS3SED-4-090809)		Soil		Sampled: 09/08/09 11:15						
Diesel Range Hydrocarbons	NWTPH-Dx	403	—	12.5	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 11:30	
Heavy Oil Range Hydrocarbons	"	588	—	31.2	"	"	"	"	"	
Surrogate(s): 2-FBP		97.1%			50 - 150 %	"			"	
p-Terphenyl-d14		129%			50 - 150 %	"			"	
SSI0049-16 (G-RS3SED-0-090809)		Soil		Sampled: 09/08/09 11:10						
Diesel Range Hydrocarbons	NWTPH-Dx	194	—	14.1	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 11:54	
Heavy Oil Range Hydrocarbons	"	492	—	35.4	"	"	"	"	"	
Surrogate(s): 2-FBP		90.9%			50 - 150 %	"			"	
p-Terphenyl-d14		114%			50 - 150 %	"			"	
SSI0049-17 (G-RS4SED-0-090809)		Soil		Sampled: 09/08/09 12:20						
Diesel Range Hydrocarbons	NWTPH-Dx	8830	—	142	mg/kg dry	10x	9090105	09/16/09 08:11	09/17/09 12:17	
Heavy Oil Range Hydrocarbons	"	6980	—	355	"	"	"	"	"	
Surrogate(s): 2-FBP		54.7%			50 - 150 %	"			"	
p-Terphenyl-d14		71.2%			50 - 150 %	"			"	
SSI0049-18 (G-RS4SED-4-090809)		Soil		Sampled: 09/08/09 12:25						
Diesel Range Hydrocarbons	NWTPH-Dx	39.6	—	11.9	mg/kg dry	1x	9090105	09/16/09 08:11	09/17/09 12:41	
Heavy Oil Range Hydrocarbons	"	164	—	29.8	"	"	"	"	"	
Surrogate(s): 2-FBP		86.2%			50 - 150 %	"			"	
p-Terphenyl-d14		121%			50 - 150 %	"			"	

TestAmerica Spokane

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Randee Decker, Project Manager

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-01

G-RS1-SED-4

Lab Sample ID: 580-15385-1

Date Sampled: 09/07/2009 1350

Client Matrix: Solid

% Moisture: 18.6

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109022.D
Dilution:	1.0			Initial Weight/Volume:	5.876 g
Date Analyzed:	09/21/2009 1833			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		0.00018	J	0.000092	0.0021
1,2,3-Trichloropropane		ND		0.00038	0.0010
1,2-Dibromo-3-Chloropropane		0.00045	J	0.00019	0.0021
1,2-Dichloroethane		ND		0.00017	0.0010
1,2-Dichloropropane		ND		0.00018	0.0010
Bromoform		ND		0.000075	0.0010
Bromomethane		ND		0.00040	0.0010
Carbon tetrachloride		ND		0.00039	0.0010
Chloroethane		ND		0.00028	0.0010
Chloroform		ND		0.00015	0.0010
Chloromethane		0.0032		0.00018	0.0010
cis-1,3-Dichloropropene		ND		0.00012	0.0010
Dichlorobromomethane		ND		0.000077	0.0010
Ethylene Dibromide		ND		0.00014	0.0010
Hexachlorobutadiene		0.0011		0.00035	0.0010
trans-1,3-Dichloropropene		ND		0.00019	0.0010
Trichloroethene		ND		0.00018	0.0010
1,1,1-Trichloroethane		ND		0.00040	0.0010
Benzene		0.0013	B	0.000083	0.0010
Chlorobromomethane		ND		0.00026	0.0010
Tetrachloroethene		ND		0.00011	0.0010
1,1-Dichloroethane		ND		0.00041	0.0010
1,1,2-Trichloroethane		ND		0.00011	0.0010
Dichlorodifluoromethane		ND		0.00020	0.0010
Methylene Chloride		ND		0.00020	0.0010
n-Butylbenzene		0.0012		0.00033	0.0010
1,2,4-Trimethylbenzene		0.00077	J	0.00035	0.0010
2-Chlorotoluene		0.00035	J	0.00015	0.0010
Chlorodibromomethane		ND		0.00014	0.0010
Dibromomethane		ND		0.00011	0.0010
1,1-Dichloropropene		ND		0.00041	0.0010
Toluene		0.00080	JB	0.000089	0.0010 u
1,2,4-Trichlorobenzene		0.0011	JB	0.00040	0.0021 u
o-Xylene		0.00035	JB	0.000055	0.0010 u
Chlorobenzene		0.0011	B	0.00019	0.0010 u
1,3-Dichlorobenzene		0.00049	J	0.00040	0.0010
Naphthalene		0.0030	JB	0.00025	0.0052 u
Styrene		0.00051	J	0.00033	0.0010
4-Chlorotoluene		0.00046	J	0.00040	0.0010
trans-1,2-Dichloroethene		ND		0.00030	0.0010
Bromobenzene		0.00033	J	0.00016	0.0010
1,2,3-Trichlorobenzene		0.0012	JB	0.00018	0.0021 u
1,1-Dichloroethene		ND		0.00015	0.0052
1,2-Dichlorobenzene		0.00059	J	0.00036	0.0010
1,1,1,2-Tetrachloroethane		ND		0.000091	0.0010
sec-Butylbenzene		0.00081	J	0.00036	0.0010

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-01

Lab Sample ID: 580-15385-1

Date Sampled: 09/07/2009 1350

Client Matrix: Solid

% Moisture: 18.6

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B	Analysis Batch: 580-50612	Instrument ID: SEA015
Preparation: 5035	Prep Batch: 580-50608	Lab File ID: I2109022.D
Dilution: 1.0		Initial Weight/Volume: 5.876 g
Date Analyzed: 09/21/2009 1833		Final Weight/Volume: 5 mL
Date Prepared: 09/21/2009 1240		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		0.00035	J	0.00016	0.0010
Isopropylbenzene		0.00030	J	0.00016	0.0010
2,2-Dichloropropane		ND		0.00040	0.0010
N-Propylbenzene		0.00054	J	0.00015	0.0010
Trichlorofluoromethane		ND		0.00020	0.0010
4-Isopropyltoluene		0.0011		0.00032	0.0010
1,3,5-Trimethylbenzene		0.00060	J	0.00037	0.0021
cis-1,2-Dichloroethene		ND		0.00013	0.0010
m-Xylene & p-Xylene		0.00066	JB	0.00017	0.0021 U
Vinyl chloride		ND		0.00015	0.0010
tert-Butylbenzene		0.00082	J	0.00035	0.0010
1,4-Dichlorobenzene		0.00065	JB	0.00041	0.0010 U
1,3-Dichloropropane		ND		0.00023	0.0010

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	111		85 - 120
Toluene-d8 (Surr)	103		85 - 115
Trifluorotoluene (Surr)	85		75 - 125
1,2-Dichloroethane-d4 (Surr)	93		75 - 125

MS 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SS10049-02

G-RS1-SED-Ø

Lab Sample ID: 580-15385-2

Date Sampled: 09/07/2009 1355

Client Matrix: Solid

% Moisture: 31.0

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109023.D
Dilution:	1.0			Initial Weight/Volume:	5.709 g
Date Analyzed:	09/21/2009 1857			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00011	0.0025
1,2,3-Trichloropropane		ND		0.00046	0.0013
1,2-Dibromo-3-Chloropropane		ND		0.00023	0.0025
1,2-Dichloroethane		ND		0.00020	0.0013
1,2-Dichloropropane		ND		0.00022	0.0013
Bromoform		ND		0.000091	0.0013
Bromomethane		ND		0.00049	0.0013
Carbon tetrachloride		ND		0.00047	0.0013
Chloroethane		ND		0.00034	0.0013
Chloroform		ND		0.00019	0.0013
Chloromethane		ND		0.00022	0.0013
cis-1,3-Dichloropropene		ND		0.00015	0.0013
Dichlorobromomethane		ND		0.000094	0.0013
Ethylene Dibromide		ND		0.00017	0.0013
Hexachlorobutadiene		0.00047	J	0.00043	0.0013
trans-1,3-Dichloropropene		ND		0.00023	0.0013
Trichloroethane		ND		0.00022	0.0013
1,1,1-Trichloroethane		ND		0.00049	0.0013
Benzene		0.00051	JB	0.00010	0.0013 U
Chlorobromomethane		ND		0.00032	0.0013
Tetrachloroethene		ND		0.00013	0.0013
1,1-Dichloroethane		ND		0.00050	0.0013
1,1,2-Trichloroethane		ND		0.00013	0.0013
Dichlorodifluoromethane		ND		0.00024	0.0013
Methylene Chloride		ND		0.00024	0.0013
n-Butylbenzene		0.00052	J	0.00040	0.0013
1,2,4-Trimethylbenzene		ND		0.00042	0.0013
2-Chlorotoluene		ND		0.00019	0.0013
Chlorodibromomethane		ND		0.00017	0.0013
Dibromomethane		ND		0.00013	0.0013
1,1-Dichloropropene		ND		0.00049	0.0013
Toluene		0.00079	JB	0.00011	0.0013 U
1,2,4-Trichlorobenzene		0.00054	JB	0.00049	0.0025 U
o-Xylene		0.00017	JB	0.000067	0.0013 U
Chlorobenzene		0.00042	JB	0.00023	0.0013 U
1,3-Dichlorobenzene		ND		0.00048	0.0013
Naphthalene		0.00067	JB	0.00030	0.0063 U
Styrene		ND		0.00040	0.0013
4-Chlorotoluene		ND		0.00049	0.0013
trans-1,2-Dichloroethene		ND		0.00036	0.0013
Bromobenzene		ND		0.00020	0.0013
1,2,3-Trichlorobenzene		0.00060	JB	0.00022	0.0025 U
1,1-Dichloroethene		ND		0.00018	0.0063
1,2-Dichlorobenzene		ND		0.00044	0.0013
1,1,1,2-Tetrachloroethane		ND		0.00011	0.0013
sec-Butylbenzene		ND		0.00043	0.0013

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-02

Lab Sample ID: 580-15385-2

Date Sampled: 09/07/2009 1355

Client Matrix: Solid

% Moisture: 31.0

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50612

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50608

Lab File ID: I2109023.D

Dilution: 1.0

Initial Weight/Volume: 5.709 g

Date Analyzed: 09/21/2009 1857

Final Weight/Volume: 5 mL

Date Prepared: 09/21/2009 1240

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00019	0.0013
Isopropylbenzene		ND		0.00019	0.0013
2,2-Dichloropropane		ND		0.00049	0.0013
N-Propylbenzene		0.00020	J	0.00018	0.0013
Trichlorofluoromethane		ND		0.00025	0.0013
4-Isopropyltoluene		0.00081	J	0.00039	0.0013
1,3,5-Trimethylbenzene		ND		0.00045	0.0025
cis-1,2-Dichloroethene		ND		0.00016	0.0013
m-Xylene & p-Xylene		0.00037	J.B	0.00020	0.0025 U
Vinyl chloride		ND		0.00019	0.0013
tert-Butylbenzene		ND		0.00043	0.0013
1,4-Dichlorobenzene		ND		0.00050	0.0013
1,3-Dichloropropane		ND		0.00028	0.0013

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	112		85 - 120
Toluene-d8 (Surr)	104		85 - 115
Trifluorotoluene (Surr)	92		75 - 125
1,2-Dichloroethane-d4 (Surr)	95		75 - 125

TMS 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-03

G-RS8SED-3

Lab Sample ID: 580-15385-3

Date Sampled: 09/07/2009 1445

Client Matrix: Solid

% Moisture: 17.4

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50612

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50608

Lab File ID: I2109024.D

Dilution: 1.0

Initial Weight/Volume: 3.927 g

Date Analyzed: 09/21/2009 1921

Final Weight/Volume: 5 mL

Date Prepared: 09/21/2009 1240

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00014	0.0031
1,2,3-Trichloropropane		ND		0.00056	0.0015
1,2-Dibromo-3-Chloropropane		ND		0.00028	0.0031
1,2-Dichloroethane		ND		0.00025	0.0015
1,2-Dichloropropane		ND		0.00026	0.0015
Bromoform		ND		0.00011	0.0015
Bromomethane		ND		0.00059	0.0015
Carbon tetrachloride		ND		0.00057	0.0015
Chloroethane		ND		0.00041	0.0015
Chloroform		ND		0.00023	0.0015
Chloromethane		ND		0.00027	0.0015
cis-1,3-Dichloropropene		ND		0.00018	0.0015
Dichlorobromomethane		ND		0.00011	0.0015
Ethylene Dibromide		ND		0.00020	0.0015
Hexachlorobutadiene		ND		0.00052	0.0015
trans-1,3-Dichloropropene		ND		0.00027	0.0015
Trichloroethene		ND		0.00027	0.0015
1,1,1-Trichloroethane		ND		0.00059	0.0015
Benzene		0.00017	JB	0.00012	0.0015 U
Chlorobromomethane		ND		0.00038	0.0015
Tetrachloroethene		ND		0.00016	0.0015
1,1-Dichloroethane		ND		0.00061	0.0015
1,1,2-Trichloroethane		ND		0.00016	0.0015
Dichlorodifluoromethane		ND		0.00030	0.0015
Methylene Chloride		ND		0.00030	0.0015
n-Butylbenzene		ND		0.00048	0.0015
1,2,4-Trimethylbenzene		ND		0.00051	0.0015
2-Chlorotoluene		ND		0.00023	0.0015
Chlorodibromomethane		ND		0.00021	0.0015
Dibromomethane		ND		0.00016	0.0015
1,1-Dichloropropene		ND		0.00060	0.0015
Toluene		0.00024	JB	0.00013	0.0015 U
1,2,4-Trichlorobenzene		ND		0.00059	0.0031
o-Xylene		0.000098	JB	0.000082	0.0015 U
Chlorobenzene		0.0011	JB	0.00027	0.0015 U
1,3-Dichlorobenzene		ND		0.00059	0.0015
Naphthalene		ND		0.00037	0.0077
Styrene		ND		0.00049	0.0015
4-Chlorotoluene		ND		0.00060	0.0015
trans-1,2-Dichloroethene		ND		0.00044	0.0015
Bromobenzene		ND		0.00024	0.0015
1,2,3-Trichlorobenzene		0.00044	JB	0.00027	0.0031 U
1,1-Dichloroethene		ND		0.00021	0.0077
1,2-Dichlorobenzene		ND		0.00054	0.0015
1,1,1,2-Tetrachloroethane		ND		0.00013	0.0015
sec-Butylbenzene		ND		0.00053	0.0015

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-03

Lab Sample ID: 580-15385-3

Date Sampled: 09/07/2009 1445

Client Matrix: Solid

% Moisture: 17.4

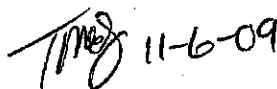
Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109024.D
Dilution:	1.0			Initial Weight/Volume:	3.927 g
Date Analyzed:	09/21/2009 1921			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00023	0.0015
Isopropylbenzene		ND		0.00023	0.0015
2,2-Dichloropropane		ND		0.00059	0.0015
N-Propylbenzene		ND		0.00022	0.0015
Trichlorofluoromethane		ND		0.00030	0.0015
4-Isopropyltoluene		ND		0.00048	0.0015
1,3,5-Trimethylbenzene		ND		0.00054	0.0031
cis-1,2-Dichloroethene		ND		0.00020	0.0015
m-Xylene & p-Xylene		ND		0.00025	0.0031
Vinyl chloride		ND		0.00023	0.0015
tert-Butylbenzene		ND		0.00052	0.0015
1,4-Dichlorobenzene		ND		0.00061	0.0015
1,3-Dichloropropane		ND		0.00034	0.0015

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	100		85 - 120
Toluene-d8 (Surr)	101		85 - 115
Trifluorotoluene (Surr)	105		75 - 125
1,2-Dichloroethane-d4 (Surr)	97		75 - 125



Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SS10049-04

RS8-SED ϕ

Lab Sample ID: 580-15385-4

Date Sampled: 09/07/2009 1450

Client Matrix: Solid

% Moisture: 33.1

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50612

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50608

Lab File ID: I2109025.D

Dilution: 1.0

Initial Weight/Volume: 6.252 g

Date Analyzed: 09/21/2009 1945

Final Weight/Volume: 5 mL

Date Prepared: 09/21/2009 1240

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00011	0.0024
1,2,3-Trichloropropane		ND		0.00043	0.0012
1,2-Dibromo-3-Chloropropane		ND		0.00022	0.0024
1,2-Dichloroethane		ND		0.00019	0.0012
1,2-Dichloropropane		ND		0.00020	0.0012
Bromoform		ND		0.000086	0.0012
Bromomethane		ND		0.00046	0.0012
Carbon tetrachloride		ND		0.00044	0.0012
Chloroethane		ND		0.00032	0.0012
Chloroform		ND		0.00018	0.0012
Chloromethane		ND		0.00021	0.0012
cis-1,3-Dichloropropene		ND		0.00014	0.0012
Dichlorobromomethane		ND		0.000088	0.0012
Ethylene Dibromide		ND		0.00016	0.0012
Hexachlorobutadiene		ND		0.00040	0.0012
trans-1,3-Dichloropropene		ND		0.00021	0.0012
Trichloroethene		ND		0.00021	0.0012
1,1,1-Trichloroethane		ND		0.00046	0.0012
Benzene		0.00019	JB	0.000094	0.0012 u
Chlorobromomethane		ND		0.00030	0.0012
Tetrachloroethene		ND		0.00012	0.0012
1,1-Dichloroethane		ND		0.00047	0.0012
1,1,2-Trichloroethane		ND		0.00012	0.0012
Dichlorodifluoromethane		ND		0.00023	0.0012
Methylene Chloride		ND		0.00023	0.0012
n-Butylbenzene		ND		0.00038	0.0012
1,2,4-Trimethylbenzene		ND		0.00040	0.0012
2-Chlorotoluene		ND		0.00017	0.0012
Chlorodibromomethane		ND		0.00016	0.0012
Dibromomethane		ND		0.00013	0.0012
1,1-Dichloropropene		ND		0.00046	0.0012
Toluene		0.00037	JB	0.00010	0.0012 u
1,2,4-Trichlorobenzene		ND		0.00046	0.0024
o-Xylene		ND		0.000063	0.0012
Chlorobenzene		0.00080	JB	0.00021	0.0012 u
1,3-Dichlorobenzene		ND		0.00045	0.0012
Naphthalene		ND		0.00029	0.0060
Styrene		ND		0.00038	0.0012
4-Chlorotoluene		ND		0.00046	0.0012
trans-1,2-Dichloroethene		ND		0.00034	0.0012
Bromobenzene		ND		0.00019	0.0012
1,2,3-Trichlorobenzene		ND		0.00021	0.0024
1,1-Dichloroethene		ND		0.00017	0.0060
1,2-Dichlorobenzene		ND		0.00042	0.0012
1,1,1,2-Tetrachloroethane		ND		0.00010	0.0012
sec-Butylbenzene		ND		0.00041	0.0012

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-04

Lab Sample ID: 580-15385-4

Date Sampled: 09/07/2009 1450

Client Matrix: Solid

% Moisture: 33.1

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109025.D
Dilution:	1.0			Initial Weight/Volume:	6.252 g
Date Analyzed:	09/21/2009 1945			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00018	0.0012
Isopropylbenzene		ND		0.00018	0.0012
2,2-Dichloropropane		ND		0.00046	0.0012
N-Propylbenzene		ND		0.00017	0.0012
Trichlorofluoromethane		ND		0.00023	0.0012
4-Isopropyltoluene		0.00078	J	0.00037	0.0012
1,3,5-Trimethylbenzene		ND		0.00042	0.0024
cis-1,2-Dichloroethene		ND		0.00015	0.0012
m-Xylene & p-Xylene		0.00020	JB	0.00019	0.0024 U
Vinyl chloride		ND		0.00018	0.0012
tert-Butylbenzene		ND		0.00040	0.0012
1,4-Dichlorobenzene		ND		0.00047	0.0012
1,3-Dichloropropane		ND		0.00026	0.0012

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		85 - 120
Toluene-d8 (Surr)	102		85 - 115
Trifluorotoluene (Surr)	89		75 - 125
1,2-Dichloroethane-d4 (Surr)	96		75 - 125

THG 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-05

RS7-SED-Ø

Lab Sample ID: 580-15385-5

Date Sampled: 09/07/2009 1530

Client Matrix: Solid

% Moisture: 30.8

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50612

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50608

Lab File ID: I2109026.D

Dilution: 1.0

Initial Weight/Volume: 5.082 g

Date Analyzed: 09/21/2009 2009

Final Weight/Volume: 5 mL

Date Prepared: 09/21/2009 1240

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00013	0.0028
1,2,3-Trichloropropane		ND		0.00051	0.0014
1,2-Dibromo-3-Chloropropane		ND		0.00026	0.0028
1,2-Dichloroethane		ND		0.00023	0.0014
1,2-Dichloropropane		ND		0.00024	0.0014
Bromoform		ND		0.00010	0.0014
Bromomethane		ND		0.00055	0.0014
Carbon tetrachloride		ND		0.00053	0.0014
Chloroethane		ND		0.00038	0.0014
Chloroform		ND		0.00021	0.0014
Chloromethane		ND		0.00025	0.0014
cis-1,3-Dichloropropene		ND		0.00017	0.0014
Dichlorobromomethane		ND		0.00011	0.0014
Ethylene Dibromide		ND		0.00019	0.0014
Hexachlorobutadiene		ND		0.00048	0.0014
trans-1,3-Dichloropropene		ND		0.00025	0.0014
Trichloroethene		ND		0.00025	0.0014
1,1,1-Trichloroethane		ND		0.00055	0.0014
Benzene		0.00033	JB	0.00011	0.0014 u
Chlorobromomethane		ND		0.00035	0.0014
Tetrachloroethene		ND		0.00015	0.0014
1,1-Dichloroethane		ND		0.00056	0.0014
1,1,2-Trichloroethane		ND		0.00014	0.0014
Dichlorodifluoromethane		ND		0.00027	0.0014
Methylene Chloride		ND		0.00027	0.0014
n-Butylbenzene		ND		0.00045	0.0014
1,2,4-Trimethylbenzene		ND		0.00047	0.0014
2-Chlorotoluene		ND		0.00021	0.0014
Chlorodibromomethane		ND		0.00019	0.0014
Dibromomethane		ND		0.00015	0.0014
1,1-Dichloropropene		ND		0.00055	0.0014
✓ Toluene		0.0018	B	0.00012	0.0014
1,2,4-Trichlorobenzene		ND		0.00055	0.0028
o-Xylene		0.000098	JB	0.000075	0.0014 u
Chlorobenzene		0.00080	JB	0.00025	0.0014 u
1,3-Dichlorobenzene		ND		0.00054	0.0014
Naphthalene		ND		0.00034	0.0071
Styrene		ND		0.00045	0.0014
4-Chlorotoluene		ND		0.00055	0.0014
trans-1,2-Dichloroethene		ND		0.00041	0.0014
Bromobenzene		ND		0.00022	0.0014
1,2,3-Trichlorobenzene		ND		0.00024	0.0028
1,1-Dichloroethene		ND		0.00020	0.0071
1,2-Dichlorobenzene		ND		0.00050	0.0014
1,1,1,2-Tetrachloroethane		ND		0.00012	0.0014
sec-Butylbenzene		ND		0.00049	0.0014

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-05

Lab Sample ID: 580-15385-5

Date Sampled: 09/07/2009 1530

Client Matrix: Solid

% Moisture: 30.8

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109026.D
Dilution:	1.0			Initial Weight/Volume:	5.082 g
Date Analyzed:	09/21/2009 2009			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00021	0.0014
Isopropylbenzene		ND		0.00021	0.0014
2,2-Dichloropropane		ND		0.00055	0.0014
N-Propylbenzene		ND		0.00020	0.0014
Trichlorofluoromethane		ND		0.00028	0.0014
4-Isopropyltoluene		0.00097	J	0.00044	0.0014
1,3,5-Trimethylbenzene		ND		0.00050	0.0028
cis-1,2-Dichloroethene		ND		0.00018	0.0014
m-Xylene & p-Xylene		0.00024	JB	0.00023	0.0028 <i>u</i>
Vinyl chloride		ND		0.00021	0.0014
tert-Butylbenzene		ND		0.00048	0.0014
1,4-Dichlorobenzene		ND		0.00056	0.0014
1,3-Dichloropropane		ND		0.00031	0.0014

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 120
Toluene-d8 (Surr)	100		85 - 115
Trifluorotoluene (Surr)	97		75 - 125
1,2-Dichloroethane-d4 (Surr)	95		75 - 125

MS 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-06

RS-7-SED-4

Lab Sample ID: 580-15385-6

Date Sampled: 09/07/2009 1525

Client Matrix: Solid

% Moisture: 18.2

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch: 580-50608	Lab File ID:	I2109027.D
Dilution:	1.0		Initial Weight/Volume:	5.803 g
Date Analyzed:	09/21/2009 2033		Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.000093	0.0021
1,2,3-Trichloropropane		ND		0.00038	0.0011
1,2-Dibromo-3-Chloropropane		ND		0.00019	0.0021
1,2-Dichloroethane		ND		0.00017	0.0011
1,2-Dichloropropane		ND		0.00018	0.0011
Bromoform		ND		0.000076	0.0011
Bromomethane		ND		0.00041	0.0011
Carbon tetrachloride		ND		0.00039	0.0011
Chloroethane		ND		0.00028	0.0011
Chloroform		ND		0.00016	0.0011
Chloromethane		ND		0.00019	0.0011
cis-1,3-Dichloropropene		ND		0.00012	0.0011
Dichlorobromomethane		ND		0.000078	0.0011
Ethylene Dibromide		ND		0.00014	0.0011
Hexachlorobutadiene		ND		0.00035	0.0011
trans-1,3-Dichloropropene		ND		0.00019	0.0011
Trichloroethene		ND		0.00019	0.0011
1,1,1-Trichloroethane		ND		0.00040	0.0011
Benzene		0.00024	JB 5	0.000083	0.0011 u
Chlorobromomethane		ND		0.00026	0.0011
Tetrachloroethene		ND		0.00011	0.0011
1,1-Dichloroethane		ND		0.00041	0.0011
1,1,2-Trichloroethane		ND		0.00011	0.0011
Dichlorodifluoromethane		ND		0.00020	0.0011
Methylene Chloride		ND		0.00020	0.0011
n-Butylbenzene		ND		0.00033	0.0011
1,2,4-Trimethylbenzene		ND		0.00035	0.0011
2-Chlorotoluene		ND		0.00015	0.0011
Chlorodibromomethane		ND		0.00014	0.0011
Dibromomethane		ND		0.00011	0.0011
1,1-Dichloropropene		ND		0.00041	0.0011
Toluene		0.00034	JB 5	0.000089	0.0011 u
1,2,4-Trichlorobenzene		ND		0.00040	0.0021
o-Xylene		0.000092	JB 5	0.000056	0.0011 u
Chlorobenzene		0.00080	JB 5	0.00019	0.0011 u
1,3-Dichlorobenzene		ND		0.00040	0.0011
Naphthalene		ND		0.00025	0.0053
Styrene		ND		0.00033	0.0011
4-Chlorotoluene		ND		0.00041	0.0011
trans-1,2-Dichloroethene		ND		0.00030	0.0011
Bromobenzene		ND		0.00017	0.0011
1,2,3-Trichlorobenzene		ND		0.00018	0.0021
1,1-Dichloroethene		ND		0.00015	0.0053
1,2-Dichlorobenzene		ND		0.00037	0.0011
1,1,1,2-Tetrachloroethane		ND		0.000092	0.0011
sec-Butylbenzene		ND		0.00036	0.0011

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-06

Lab Sample ID: 580-15385-6

Date Sampled: 09/07/2009 1525

Client Matrix: Solid

% Moisture: 18.2

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50612

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50608

Lab File ID: I2109027.D

Dilution: 1.0

Initial Weight/Volume: 5.803 g

Date Analyzed: 09/21/2009 2033

Final Weight/Volume: 5 mL

Date Prepared: 09/21/2009 1240

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00016	0.0011
Isopropylbenzene		ND		0.00016	0.0011
2,2-Dichloropropane		ND		0.00040	0.0011
N-Propylbenzene		ND		0.00015	0.0011
Trichlorofluoromethane		ND		0.00021	0.0011
4-Isopropyltoluene		ND		0.00033	0.0011
1,3,5-Trimethylbenzene		ND		0.00037	0.0021
cis-1,2-Dichloroethene		ND		0.00013	0.0011
m-Xylene & p-Xylene		0.00020	18	0.00017	0.0021 u
Vinyl chloride		ND		0.00016	0.0011
tert-Butylbenzene		ND		0.00035	0.0011
1,4-Dichlorobenzene		ND		0.00042	0.0011
1,3-Dichloropropane		ND		0.00023	0.0011

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		85 - 120
Toluene-d8 (Surr)	101		85 - 115
Trifluorotoluene (Surr)	130	X	75 - 125
1,2-Dichloroethane-d4 (Surr)	103		75 - 125

MD 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-07

RS2-SED3

Lab Sample ID: 580-15385-7

Date Sampled: 09/07/2009 1615

Client Matrix: Solid

% Moisture: 22.1

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109028.D
Dilution:	1.0			Initial Weight/Volume:	2.906 g
Date Analyzed:	09/21/2009 2056			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00019	0.0044
1,2,3-Trichloropropane		ND		0.00080	0.0022
1,2-Dibromo-3-Chloropropane		ND		0.00040	0.0044
1,2-Dichloroethane		ND		0.00035	0.0022
1,2-Dichloropropane		ND		0.00038	0.0022
Bromoform		ND		0.00016	0.0022
Bromomethane		ND		0.00085	0.0022
Carbon tetrachloride		ND		0.00082	0.0022
Chloroethane		ND		0.00059	0.0022
Chloroform		ND		0.00033	0.0022
Chloromethane		ND		0.00039	0.0022
cis-1,3-Dichloropropene		ND		0.00026	0.0022
Dichlorobromomethane		ND		0.00016	0.0022
Ethylene Dibromide		ND		0.00029	0.0022
Hexachlorobutadiene		ND		0.00074	0.0022
trans-1,3-Dichloropropene		ND		0.00039	0.0022
Trichloroethene		ND		0.00039	0.0022
1,1,1-Trichloroethane		ND		0.00085	0.0022
Benzene		0.00056	JB	0.00017	0.0022 U
Chlorobromomethane		ND		0.00055	0.0022
Tetrachloroethene		ND		0.00023	0.0022
1,1-Dichloroethane		ND		0.00087	0.0022
1,1,2-Trichloroethane		ND		0.00022	0.0022
Dichlorodifluoromethane		ND		0.00042	0.0022
Methylene Chloride		ND		0.00043	0.0022
n-Butylbenzene		ND		0.00069	0.0022
1,2,4-Trimethylbenzene		ND		0.00073	0.0022
2-Chlorotoluene		ND		0.00032	0.0022
Chlorodibromomethane		ND		0.00030	0.0022
Dibromomethane		ND		0.00023	0.0022
1,1-Dichloropropene		ND		0.00086	0.0022
Toluene		0.00066	JB	0.00019	0.0022 U
1,2,4-Trichlorobenzene		ND		0.00085	0.0044
o-Xylene		0.00017	JB	0.00012	0.0022 U
Chlorobenzene		0.0014	JB	0.00039	0.0022 U
1,3-Dichlorobenzene		ND		0.00084	0.0022
Naphthalene		ND		0.00053	0.011
Styrene		ND		0.00070	0.0022
4-Chlorotoluene		ND		0.00085	0.0022
trans-1,2-Dichloroethene		ND		0.00063	0.0022
Bromobenzene		ND		0.00035	0.0022
1,2,3-Trichlorobenzene		ND		0.00038	0.0044
1,1-Dichloroethene		ND		0.00031	0.011
1,2-Dichlorobenzene		ND		0.00077	0.0022
1,1,1,2-Tetrachloroethane		ND		0.00019	0.0022
sec-Butylbenzene		ND		0.00075	0.0022

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-07

Lab Sample ID: 580-15385-7

Date Sampled: 09/07/2009 1615

Client Matrix: Solid

% Moisture: 22.1

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	I2109028.D
Dilution:	1.0			Initial Weight/Volume:	2.906 g
Date Analyzed:	09/21/2009 2056			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00033	0.0022
Isopropylbenzene		ND		0.00033	0.0022
2,2-Dichloropropane		ND		0.00085	0.0022
N-Propylbenzene		ND		0.00032	0.0022
Trichlorofluoromethane		ND		0.00043	0.0022
4-Isopropyltoluene		0.0015	J	0.00069	0.0022
1,3,5-Trimethylbenzene		ND		0.00078	0.0044
cis-1,2-Dichloroethene		ND		0.00028	0.0022
m-Xylene & p-Xylene		ND		0.00035	0.0044
Vinyl chloride		ND		0.00033	0.0022
tert-Butylbenzene		ND		0.00074	0.0022
1,4-Dichlorobenzene		ND		0.00088	0.0022
1,3-Dichloropropane		ND		0.00048	0.0022

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	106		85 - 120
Toluene-d8 (Surr)	101		85 - 115
Trifluorotoluene (Surr)	101		75 - 125
1,2-Dichloroethane-d4 (Surr)	98		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-08

RS-2-SEDØ

Lab Sample ID: 580-15385-8

Date Sampled: 09/07/2009 1620

Client Matrix: Solid

% Moisture: 29.1

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50612	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50608	Lab File ID:	12109029.D
Dilution:	1.0			Initial Weight/Volume:	6.099 g
Date Analyzed:	09/21/2009 2120			Final Weight/Volume:	5 mL
Date Prepared:	09/21/2009 1240				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00010	0.0023
1,2,3-Trichloropropane		ND		0.00042	0.0012
1,2-Dibromo-3-Chloropropane		ND		0.00021	0.0023
1,2-Dichloroethane		ND		0.00018	0.0012
1,2-Dichloropropane		ND		0.00020	0.0012
Bromoform		ND		0.000083	0.0012
Bromomethane		ND		0.00045	0.0012
Carbon tetrachloride		ND		0.00043	0.0012
Chloroethane		ND		0.00031	0.0012
Chloroform		ND		0.00017	0.0012
Chloromethane		0.00080	J J	0.00020	0.0012
cis-1,3-Dichloropropene		ND		0.00014	0.0012
Dichlorobromomethane		ND		0.000086	0.0012
Ethylene Dibromide		ND		0.00015	0.0012
Hexachlorobutadiene		ND		0.00039	0.0012
trans-1,3-Dichloropropene		ND		0.00021	0.0012
Trichloroethene		ND		0.00020	0.0012
1,1,1-Trichloroethane		ND		0.00044	0.0012
Benzene		0.00062	JB J	0.000091	0.0012 U
Chlorobromomethane		ND		0.00029	0.0012
Tetrachloroethene		ND		0.00012	0.0012
1,1-Dichloroethane		ND		0.00045	0.0012
1,1,2-Trichloroethane		ND		0.00012	0.0012
Dichlorodifluoromethane		ND		0.00022	0.0012
Methylene Chloride		ND		0.00022	0.0012
n-Butylbenzene		ND		0.00036	0.0012
1,2,4-Trimethylbenzene		ND		0.00038	0.0012
2-Chlorotoluene		ND		0.00017	0.0012
Chlorodibromomethane		ND		0.00016	0.0012
Dibromomethane		ND		0.00012	0.0012
1,1-Dichloropropene		ND		0.00045	0.0012
Toluene		0.00057	JB J	0.000098	0.0012 U
1,2,4-Trichlorobenzene		ND		0.00044	0.0023
o-Xylene		0.00013	JB J	0.000061	0.0012 U
Chlorobenzene		0.00030	B J	0.00021	0.0012 U
1,3-Dichlorobenzene		ND		0.00044	0.0012
Naphthalene		0.00044	JB J	0.00028	0.0058 U
Styrene		ND		0.00036	0.0012
4-Chlorotoluene		ND		0.00045	0.0012
trans-1,2-Dichloroethene		ND		0.00033	0.0012
Bromobenzene		ND		0.00018	0.0012
1,2,3-Trichlorobenzene		ND		0.00020	0.0023
1,1-Dichloroethene		ND		0.00016	0.0058
1,2-Dichlorobenzene		ND		0.00040	0.0012
1,1,1,2-Tetrachloroethane		ND		0.00010	0.0012
sec-Butylbenzene		ND		0.00039	0.0012

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-08

Lab Sample ID: 580-15385-8

Client Matrix: Solid

% Moisture: 29.1

Date Sampled: 09/07/2009 1620

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50612

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50608

Lab File ID: I2109029.D

Dilution: 1.0

Initial Weight/Volume: 6.099 g

Date Analyzed: 09/21/2009 2120

Final Weight/Volume: 5 mL

Date Prepared: 09/21/2009 1240

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00017	0.0012
Isopropylbenzene		ND		0.00017	0.0012
2,2-Dichloropropane		ND		0.00044	0.0012
N-Propylbenzene		ND		0.00017	0.0012
Trichlorofluoromethane		ND		0.00023	0.0012
4-Isopropyltoluene		0.0072	J	0.00036	0.0012
1,3,5-Trimethylbenzene		ND		0.00041	0.0023
cis-1,2-Dichloroethene		ND		0.00015	0.0012
m-Xylene & p-Xylene		0.00035	J B J	0.00018	0.0023 u
Vinyl chloride		ND		0.00017	0.0012
tert-Butylbenzene		ND		0.00039	0.0012
1,4-Dichlorobenzene		ND		0.00046	0.0012
1,3-Dichloropropane		ND		0.00025	0.0012

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 120
Toluene-d8 (Surr)	102		85 - 115
Trifluorotoluene (Surr)	166	X	75 - 125
1,2-Dichloroethane-d4 (Surr)	100		75 - 125

MS 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-10

RS5-SEDØ

Lab Sample ID: 580-15385-10

Date Sampled: 09/08/2009 0830

Client Matrix: Solid

% Moisture: 29.7

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209018.D
Dilution:	1.0			Initial Weight/Volume:	5.70 g
Date Analyzed:	09/22/2009 1546			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00011	0.0025
1,2,3-Trichloropropane		ND		0.00045	0.0012
1,2-Dibromo-3-Chloropropane		ND		0.00023	0.0025
1,2-Dichloroethane		ND		0.00020	0.0012
1,2-Dichloropropane		ND		0.00021	0.0012
Bromoform		ND		0.000090	0.0012
Bromomethane		ND		0.00048	0.0012
Carbon tetrachloride		ND		0.00046	0.0012
Chloroethane		ND		0.00033	0.0012
Chloroform		ND		0.00018	0.0012
Chloromethane		ND		0.00022	0.0012
cis-1,3-Dichloropropene		ND		0.00015	0.0012
Dichlorobromomethane		ND		0.000092	0.0012
Ethylene Dibromide		ND		0.00016	0.0012
Hexachlorobutadiene		ND		0.00042	0.0012
trans-1,3-Dichloropropene		ND		0.00022	0.0012
Trichloroethene		ND		0.00022	0.0012
1,1,1-Trichloroethane		ND		0.00048	0.0012
Benzene		0.00025	JB	0.000099	0.0012 u
Chlorobromomethane		ND		0.00031	0.0012
Tetrachloroethene		ND		0.00013	0.0012
1,1-Dichloroethane		ND		0.00049	0.0012
1,1,2-Trichloroethane		ND		0.00013	0.0012
Dichlorodifluoromethane		ND		0.00024	0.0012
Methylene Chloride		ND		0.00024	0.0012
n-Butylbenzene		ND		0.00039	0.0012
1,2,4-Trimethylbenzene		ND		0.00041	0.0012
2-Chlorotoluene		ND		0.00018	0.0012
Chlorodibromomethane		ND		0.00017	0.0012
Dibromomethane		ND		0.00013	0.0012
1,1-Dichloropropene		ND		0.00048	0.0012
Toluene		0.00031	JB	0.00011	0.0012 u
1,2,4-Trichlorobenzene		ND		0.00048	0.0025
o-Xylene		ND		0.000066	0.0012
Chlorobenzene		0.00046	JB	0.00022	0.0012 u
1,3-Dichlorobenzene		ND		0.00047	0.0012
Naphthalene		ND		0.00030	0.0062
Styrene		ND		0.00039	0.0012
4-Chlorotoluene		ND		0.00048	0.0012
trans-1,2-Dichloroethene		ND		0.00036	0.0012
Bromobenzene		ND		0.00020	0.0012
1,2,3-Trichlorobenzene		ND		0.00021	0.0025
1,1-Dichloroethene		ND		0.00017	0.0062
1,2-Dichlorobenzene		ND		0.00043	0.0012
1,1,1,2-Tetrachloroethane		ND		0.00011	0.0012
sec-Butylbenzene		ND		0.00043	0.0012

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-10

Lab Sample ID: 580-15385-10

Client Matrix: Solid

% Moisture: 29.7

Date Sampled: 09/08/2009 0830

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50716

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50646

Lab File ID: I2209018.D

Dilution: 1.0

Initial Weight/Volume: 5.70 g

Date Analyzed: 09/22/2009 1546

Final Weight/Volume: 5 mL

Date Prepared: 09/22/2009 0732

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00019	0.0012
Isopropylbenzene		ND		0.00019	0.0012
2,2-Dichloropropane		ND		0.00048	0.0012
N-Propylbenzene		ND		0.00018	0.0012
Trichlorofluoromethane		ND		0.00024	0.0012
4-Isopropyltoluene		ND		0.00039	0.0012
1,3,5-Trimethylbenzene		ND		0.00044	0.0025
cis-1,2-Dichloroethene		ND		0.00016	0.0012
m-Xylene & p-Xylene		ND		0.00020	0.0025
Vinyl chloride		ND		0.00018	0.0012
tert-Butylbenzene		ND		0.00042	0.0012
1,4-Dichlorobenzene		ND		0.00050	0.0012
1,3-Dichloropropane		ND		0.00027	0.0012

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 120
Toluene-d8 (Surr)	99		85 - 115
Trifluorotoluene (Surr)	105		75 - 125
1,2-Dichloroethane-d4 (Surr)	106		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SS10049-11

G-RS5D-SED-Ø

Lab Sample ID: 580-15385-11

Date Sampled: 09/08/2009 0835

Client Matrix: Solid

% Moisture: 29.4

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209019.D
Dilution:	1.0			Initial Weight/Volume:	5.44 g
Date Analyzed:	09/22/2009 1610			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00011	0.0026
1,2,3-Trichloropropane		ND		0.00047	0.0013
1,2-Dibromo-3-Chloropropane		ND		0.00024	0.0026
1,2-Dichloroethane		ND		0.00021	0.0013
1,2-Dichloropropane		ND		0.00022	0.0013
Bromoform		ND		0.000094	0.0013
Bromomethane		ND		0.00050	0.0013
Carbon tetrachloride		ND		0.00048	0.0013
Chloroethane		ND		0.00035	0.0013
Chloroform		ND		0.00019	0.0013
Chloromethane		ND		0.00023	0.0013
cis-1,3-Dichloropropene		ND		0.00015	0.0013
Dichlorobromomethane		ND		0.000096	0.0013
Ethylene Dibromide		ND		0.00017	0.0013
Hexachlorobutadiene		ND		0.00044	0.0013
trans-1,3-Dichloropropene		ND		0.00023	0.0013
Trichloroethene		ND		0.00023	0.0013
1,1,1-Trichloroethane		ND		0.00050	0.0013
Benzene		0.00021	JB J	0.00010	0.0013 u
Chlorobromomethane		ND		0.00032	0.0013
Tetrachloroethene		ND		0.00013	0.0013
1,1-Dichloroethane		ND		0.00051	0.0013
1,1,2-Trichloroethane		ND		0.00013	0.0013
Dichlorodifluoromethane		ND		0.00025	0.0013
Methylene Chloride		ND		0.00025	0.0013
n-Butylbenzene		ND		0.00041	0.0013
1,2,4-Trimethylbenzene		ND		0.00043	0.0013
2-Chlorotoluene		ND		0.00019	0.0013
Chlorodibromomethane		ND		0.00018	0.0013
Dibromomethane		ND		0.00014	0.0013
1,1-Dichloropropene		ND		0.00051	0.0013
Toluene		0.00051	JB J	0.00011	0.0013 u
1,2,4-Trichlorobenzene		ND		0.00050	0.0026
o-Xylene		0.00018	JB J	0.000089	0.0013
Chlorobenzene		0.0012	JB J	0.00023	0.0013 u
1,3-Dichlorobenzene		ND		0.00049	0.0013
Naphthalene		ND		0.00031	0.0065
Styrene		ND		0.00041	0.0013
4-Chlorotoluene		ND		0.00050	0.0013
trans-1,2-Dichloroethene		ND		0.00037	0.0013
Bromobenzene		ND		0.00020	0.0013
1,2,3-Trichlorobenzene		ND		0.00022	0.0026
1,1-Dichloroethene		ND		0.00018	0.0065
1,2-Dichlorobenzene		ND		0.00045	0.0013
1,1,1,2-Tetrachloroethane		ND		0.00011	0.0013
sec-Butylbenzene		ND		0.00044	0.0013

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-11

Lab Sample ID: 580-15385-11

Date Sampled: 09/08/2009 0835

Client Matrix: Solid

% Moisture: 29.4

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50716

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50646

Lab File ID: I2209019.D

Dilution: 1.0

Initial Weight/Volume: 5.44 g

Date Analyzed: 09/22/2009 1610

Final Weight/Volume: 5 mL

Date Prepared: 09/22/2009 0732

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00019	0.0013
Isopropylbenzene		ND		0.00019	0.0013
2,2-Dichloropropane		ND		0.00050	0.0013
N-Propylbenzene		ND		0.00019	0.0013
Trichlorofluoromethane		ND		0.00025	0.0013
4-Isopropyltoluene		ND		0.00040	0.0013
1,3,5-Trimethylbenzene		ND		0.00046	0.0026
cis-1,2-Dichloroethene		ND		0.00017	0.0013
m-Xylene & p-Xylene		0.00022	J J	0.00021	0.0026
Vinyl chloride		ND		0.00019	0.0013
tert-Butylbenzene		ND		0.00044	0.0013
1,4-Dichlorobenzene		ND		0.00052	0.0013
1,3-Dichloropropane		ND		0.00029	0.0013

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 120
Toluene-d8 (Surr)	97		85 - 115
Trifluorotoluene (Surr)	147	X	75 - 125
1,2-Dichloroethane-d4 (Surr)	108		75 - 125

JH 11-06-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-12

RS 5- SED4

Lab Sample ID: 580-15385-12

Date Sampled: 09/08/2009 0845

Client Matrix: Solid

% Moisture: 18.0

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209020.D
Dilution:	1.0			Initial Weight/Volume:	6.52 g
Date Analyzed:	09/22/2009 1634			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.000082	0.0019
1,2,3-Trichloropropane		ND		0.00034	0.00093
1,2-Dibromo-3-Chloropropane		ND		0.00017	0.0019
1,2-Dichloroethane		ND		0.00015	0.00093
1,2-Dichloropropane		ND		0.00016	0.00093
Bromoform		ND		0.000067	0.00093
Bromomethane		ND		0.00036	0.00093
Carbon tetrachloride		ND		0.00035	0.00093
Chloroethane		ND		0.00025	0.00093
Chloroform		ND		0.00014	0.00093
Chloromethane		ND		0.00016	0.00093
cis-1,3-Dichloropropene		ND		0.00011	0.00093
Dichlorobromomethane		ND		0.000069	0.00093
Ethylene Dibromide		ND		0.00012	0.00093
Hexachlorobutadiene		ND		0.00031	0.00093
trans-1,3-Dichloropropene		ND		0.00017	0.00093
Trichloroethene		ND		0.00016	0.00093
1,1,1-Trichloroethane		ND		0.00036	0.00093
Benzene		0.00029	LB	0.000074	0.00093 U
Chlorobromomethane		ND		0.00023	0.00093
Tetrachloroethene		ND		0.000096	0.00093
1,1-Dichloroethane		ND		0.00037	0.00093
1,1,2-Trichloroethane		ND		0.000094	0.00093
Dichlorodifluoromethane		ND		0.00018	0.00093
Methylene Chloride		ND		0.00018	0.00093
n-Butylbenzene		ND		0.00029	0.00093
1,2,4-Trimethylbenzene		ND		0.00031	0.00093
2-Chlorotoluene		ND		0.00014	0.00093
Chlorodibromomethane		ND		0.00013	0.00093
Dibromomethane		ND		0.000098	0.00093
1,1-Dichloropropene		ND		0.00036	0.00093
Toluene		0.00049	LB	0.000079	0.00093 U
1,2,4-Trichlorobenzene		ND		0.00036	0.0019
o-Xylene		0.00014	J	0.000050	0.00093
Chlorobenzene		0.0010 U	B	0.00017	0.00093
1,3-Dichlorobenzene		ND		0.00036	0.00093
Naphthalene		0.0034	J	0.00022	0.0047
Styrene		ND		0.00029	0.00093
4-Chlorotoluene		ND		0.00036	0.00093
trans-1,2-Dichloroethene		ND		0.00027	0.00093
Bromobenzene		ND		0.00015	0.00093
1,2,3-Trichlorobenzene		ND		0.00016	0.0019
1,1-Dichloroethene		ND		0.00013	0.0047
1,2-Dichlorobenzene		0.00039	J	0.00033	0.00093
1,1,1,2-Tetrachloroethane		ND		0.000081	0.00093
sec-Butylbenzene		0.0014		0.00032	0.00093

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-12

Lab Sample ID: 580-15385-12

Date Sampled: 09/08/2009 0845

Client Matrix: Solid

% Moisture: 18.0

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50716

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50646

Lab File ID: I2209020.D

Dilution: 1.0

Initial Weight/Volume: 6.52 g

Date Analyzed: 09/22/2009 1634

Final Weight/Volume: 5 mL

Date Prepared: 09/22/2009 0732

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00014	0.00093
Isopropylbenzene		0.00050	J	0.00014	0.00093
2,2-Dichloropropane		ND		0.00036	0.00093
N-Propylbenzene		0.00045	J	0.00013	0.00093
Trichlorofluoromethane		ND		0.00018	0.00093
4-Isopropyltoluene		0.00045	J	0.00029	0.00093
1,3,5-Trimethylbenzene		ND		0.00033	0.0019
cis-1,2-Dichloroethene		ND		0.00012	0.00093
m-Xylene & p-Xylene		0.00022	J	0.00015	0.0019
Vinyl chloride		ND		0.00014	0.00093
tert-Butylbenzene		ND		0.00032	0.00093
1,4-Dichlorobenzene		ND		0.00037	0.00093
1,3-Dichloropropane		ND		0.00020	0.00093

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	104		85 - 120
Toluene-d8 (Surr)	100		85 - 115
Trifluorotoluene (Surr)	94		75 - 125
1,2-Dichloroethane-d4 (Surr)	103		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-13

RS 6-SEDØ

Lab Sample ID: 580-15385-13

Date Sampled: 09/08/2009 0740

Client Matrix: Solid

% Moisture: 25.0

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50716

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50646

Lab File ID: I2209021.D

Dilution: 1.0

Initial Weight/Volume: 4.48 g

Date Analyzed: 09/22/2009 1657

Final Weight/Volume: 5 mL

Date Prepared: 09/22/2009 0732

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00013	0.0030
1,2,3-Trichloropropane		ND		0.00054	0.0015
1,2-Dibromo-3-Chloropropane		ND		0.00027	0.0030
1,2-Dichloroethane		ND		0.00024	0.0015
1,2-Dichloropropane		ND		0.00025	0.0015
Bromoform		ND		0.00011	0.0015
Bromomethane		ND		0.00057	0.0015
Carbon tetrachloride		ND		0.00055	0.0015
Chloroethane		ND		0.00040	0.0015
Chloroform		ND		0.00022	0.0015
Chloromethane		ND		0.00026	0.0015
cis-1,3-Dichloropropene		ND		0.00017	0.0015
Dichlorobromomethane		ND		0.00011	0.0015
Ethylene Dibromide		ND		0.00020	0.0015
Hexachlorobutadiene		ND		0.00050	0.0015
trans-1,3-Dichloropropene		ND		0.00026	0.0015
Trichloroethene		ND		0.00026	0.0015
1,1,1-Trichloroethane		ND		0.00057	0.0015
Benzene		0.00020	JB	0.00012	0.0015 U
Chlorobromomethane		ND		0.00037	0.0015
Tetrachloroethene		ND		0.00015	0.0015
1,1-Dichloroethane		ND		0.00058	0.0015
1,1,2-Trichloroethane		ND		0.00015	0.0015
Dichlorodifluoromethane		ND		0.00029	0.0015
Methylene Chloride		ND		0.00029	0.0015
n-Butylbenzene		ND		0.00047	0.0015
1,2,4-Trimethylbenzene		ND		0.00049	0.0015
2-Chlorotoluene		ND		0.00022	0.0015
Chlorodibromomethane		ND		0.00020	0.0015
Dibromomethane		ND		0.00016	0.0015
1,1-Dichloropropene		ND		0.00058	0.0015
Toluene		0.00029	JB	0.00013	0.0015 U
1,2,4-Trichlorobenzene		ND		0.00057	0.0030
o-Xylene		0.00012	J	0.000079	0.0015
Chlorobenzene		0.00035	JB	0.00026	0.0015 U
1,3-Dichlorobenzene		ND		0.00057	0.0015
Naphthalene		ND		0.00036	0.0074
Styrene		ND		0.00047	0.0015
4-Chlorotoluene		ND		0.00057	0.0015
trans-1,2-Dichloroethene		ND		0.00043	0.0015
Bromobenzene		ND		0.00023	0.0015
1,2,3-Trichlorobenzene		ND		0.00026	0.0030
1,1-Dichloroethene		ND		0.00021	0.0074
1,2-Dichlorobenzene		ND		0.00052	0.0015
1,1,1,2-Tetrachloroethane		ND		0.00013	0.0015
sec-Butylbenzene		ND		0.00051	0.0015

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-13

Lab Sample ID: 580-15385-13

Date Sampled: 09/08/2009 0740

Client Matrix: Solid

% Moisture: 25.0

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50716

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50646

Lab File ID: I2209021.D

Dilution: 1.0

Initial Weight/Volume: 4.48 g

Date Analyzed: 09/22/2009 1657

Final Weight/Volume: 5 mL

Date Prepared: 09/22/2009 0732

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00022	0.0015
Isopropylbenzene		ND		0.00022	0.0015
2,2-Dichloropropane		ND		0.00057	0.0015
N-Propylbenzene		ND		0.00021	0.0015
Trichlorofluoromethane		ND		0.00029	0.0015
4-Isopropyltoluene		ND		0.00046	0.0015
1,3,5-Trimethylbenzene		ND		0.00052	0.0030
cis-1,2-Dichloroethene		ND		0.00019	0.0015
m-Xylene & p-Xylene		0.00029	J	0.00024	0.0030
Vinyl chloride		ND		0.00022	0.0015
tert-Butylbenzene		ND		0.00050	0.0015
1,4-Dichlorobenzene		ND		0.00059	0.0015
1,3-Dichloropropane		ND		0.00033	0.0015

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	104		85 - 120
Toluene-d8 (Surr)	98		85 - 115
Trifluorotoluene (Surr)	97		75 - 125
1,2-Dichloroethane-d4 (Surr)	102		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-14

RS6-SED3

Lab Sample ID: 580-15385-14

Date Sampled: 09/08/2009 0735

Client Matrix: Solid

% Moisture: 31.9

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch: 580-50646	Lab File ID:	I2209024.D
Dilution:	1.0		Initial Weight/Volume:	5.28 g
Date Analyzed:	09/22/2009 1809		Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		0.00027	J	0.00012	0.0028
1,2,3-Trichloropropane		ND		0.00050	0.0014
1,2-Dibromo-3-Chloropropane		0.00054	J	0.00025	0.0028
1,2-Dichloroethane		ND		0.00022	0.0014
1,2-Dichloropropane		ND		0.00024	0.0014
Bromoform		ND		0.00010	0.0014
Bromomethane		ND		0.00054	0.0014
Carbon tetrachloride		ND		0.00052	0.0014
Chloroethane		ND		0.00037	0.0014
Chloroform		ND		0.00021	0.0014
Chloromethane		ND		0.00024	0.0014
cis-1,3-Dichloropropene		ND		0.00016	0.0014
Dichlorobromomethane		ND		0.00010	0.0014
Ethylene Dibromide		ND		0.00018	0.0014
Hexachlorobutadiene		0.00093	J	0.00047	0.0014
trans-1,3-Dichloropropene		ND		0.00025	0.0014
Trichloroethene		ND		0.00024	0.0014
1,1,1-Trichloroethane		ND		0.00053	0.0014
Benzene		0.00063	JB	0.00011	0.0014 U
Chlorobromomethane		ND		0.00035	0.0014
Tetrachloroethene		ND		0.00014	0.0014
1,1-Dichloroethane		ND		0.00055	0.0014
1,1,2-Trichloroethane		ND		0.00014	0.0014
Dichlorodifluoromethane		ND		0.00027	0.0014
Methylene Chloride		ND		0.00027	0.0014
n-Butylbenzene		0.0011	J	0.00044	0.0014
1,2,4-Trimethylbenzene		0.00072	J	0.00046	0.0014
2-Chlorotoluene		0.00029	J	0.00020	0.0014
Chlorodibromomethane		ND		0.00019	0.0014
Dibromomethane		ND		0.00015	0.0014
1,1-Dichloropropene		ND		0.00054	0.0014
Toluene		0.0022	B	0.00012	0.0014
1,2,4-Trichlorobenzene		0.00088	J	0.00053	0.0028
o-Xylene		0.00036	J	0.000074	0.0014
Chlorobenzene		0.00058	JB	0.00025	0.0014 U
1,3-Dichlorobenzene		0.00054	J	0.00053	0.0014
Naphthalene		0.0018	J	0.00033	0.0070
Styrene		0.00049	J	0.00044	0.0014
4-Chlorotoluene		ND		0.00054	0.0014
trans-1,2-Dichloroethene		ND		0.00040	0.0014
Bromobenzene		0.00035	J	0.00022	0.0014
1,2,3-Trichlorobenzene		0.0010	JB	0.00024	0.0028 U
1,1-Dichloroethene		ND		0.00019	0.0070
1,2-Dichlorobenzene		0.00057	J	0.00048	0.0014
1,1,1,2-Tetrachloroethane		ND		0.00012	0.0014
sec-Butylbenzene		0.00072	J	0.00047	0.0014

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-14

Lab Sample ID: 580-15385-14

Date Sampled: 09/08/2009 0735

Client Matrix: Solid

% Moisture: 31.9

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch: 580-50646	Lab File ID:	I2209024.D
Dilution:	1.0		Initial Weight/Volume:	5.28 g
Date Analyzed:	09/22/2009 1809		Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		0.00028	J	0.00021	0.0014
Isopropylbenzene		0.00029	J	0.00021	0.0014
2,2-Dichloropropane		ND		0.00053	0.0014
N-Propylbenzene		0.00088	J	0.00020	0.0014
Trichlorofluoromethane		ND		0.00027	0.0014
4-Isopropyltoluene		0.0022		0.00043	0.0014
1,3,5-Trimethylbenzene		0.00054	J	0.00049	0.0028
cis-1,2-Dichloroethene		ND		0.00018	0.0014
m-Xylene & p-Xylene		0.00065	J	0.00022	0.0028
Vinyl chloride		ND		0.00021	0.0014
tert-Butylbenzene		0.00062	J	0.00047	0.0014
1,4-Dichlorobenzene		0.00070	J	0.00055	0.0014
1,3-Dichloropropane		ND		0.00030	0.0014

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		85 - 120
Toluene-d8 (Surr)	101		85 - 115
Trifluorotoluene (Surr)	89		75 - 125
1,2-Dichloroethane-d4 (Surr)	96		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-15

RS3-SED4

Lab Sample ID: 580-15385-15

Date Sampled: 09/08/2009 1115

Client Matrix: Solid

% Moisture: 16.8

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B	Analysis Batch: 580-50716	Instrument ID: SEA015
Preparation: 5035	Prep Batch: 580-50646	Lab File ID: I2209025.D
Dilution: 1.0		Initial Weight/Volume: 7.49 g
Date Analyzed: 09/22/2009 1833		Final Weight/Volume: 5 mL
Date Prepared: 09/22/2009 0732		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.000071	0.0016
1,2,3-Trichloropropane		ND		0.00029	0.00080
1,2-Dibromo-3-Chloropropane		ND		0.00015	0.0016
1,2-Dichloroethane		ND		0.00013	0.00080
1,2-Dichloropropane		ND		0.00014	0.00080
Bromoform		ND		0.000058	0.00080
Bromomethane		ND		0.00031	0.00080
Carbon tetrachloride		ND		0.00030	0.00080
Chloroethane		ND		0.00022	0.00080
Chloroform		ND		0.00012	0.00080
Chloromethane		ND		0.00014	0.00080
cis-1,3-Dichloropropene		ND		0.000094	0.00080
Dichlorobromomethane		ND		0.000059	0.00080
Ethylene Dibromide		ND		0.00011	0.00080
Hexachlorobutadiene		ND		0.00027	0.00080
trans-1,3-Dichloropropene		ND		0.00014	0.00080
Trichloroethene		ND		0.00014	0.00080
1,1,1-Trichloroethane		ND		0.00031	0.00080
Benzene		0.00026	JB	0.000063	0.00080 u
Chlorobromomethane		ND		0.00020	0.00080
Tetrachloroethene		ND		0.000083	0.00080
1,1-Dichloroethane		ND		0.00032	0.00080
1,1,2-Trichloroethane		ND		0.000081	0.00080
Dichlorodifluoromethane		ND		0.00015	0.00080
Methylene Chloride		ND		0.00015	0.00080
n-Butylbenzene		ND		0.00025	0.00080
1,2,4-Trimethylbenzene		ND		0.00027	0.00080
2-Chlorotoluene		ND		0.00012	0.00080
Chlorodibromomethane		ND		0.00011	0.00080
Dibromomethane		ND		0.000084	0.00080
1,1-Dichloropropene		ND		0.00031	0.00080
Toluene		0.00022	JB	0.000068	0.00080 u
1,2,4-Trichlorobenzene		ND		0.00031	0.0016
o-Xylene		0.000077	J	0.000043	0.00080
Chlorobenzene		0.00021	JB	0.00014	0.00080 u
1,3-Dichlorobenzene		ND		0.00030	0.00080
Naphthalene		ND		0.00019	0.0040
Styrene		ND		0.00025	0.00080
4-Chlorotoluene		ND		0.00031	0.00080
trans-1,2-Dichloroethene		ND		0.00023	0.00080
Bromobenzene		ND		0.00013	0.00080
1,2,3-Trichlorobenzene		0.00021	JB	0.00014	0.0016 u
1,1-Dichloroethene		ND		0.00011	0.0040
1,2-Dichlorobenzene		ND		0.00028	0.00080
1,1,1,2-Tetrachloroethane		ND		0.000070	0.00080
sec-Butylbenzene		ND		0.00027	0.00080

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSJ0049-15

Lab Sample ID: 580-15385-15

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 09/08/2009 1115

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-50716

Instrument ID: SEA015

Preparation: 5035

Prep Batch: 580-50646

Lab File ID: I2209025.D

Dilution: 1.0

Initial Weight/Volume: 7.49 g

Date Analyzed: 09/22/2009 1833

Final Weight/Volume: 5 mL

Date Prepared: 09/22/2009 0732

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00012	0.00080
Isopropylbenzene		ND		0.00012	0.00080
2,2-Dichloropropane		ND		0.00031	0.00080
N-Propylbenzene		ND		0.00012	0.00080
Trichlorofluoromethane		ND		0.00016	0.00080
4-Isopropyltoluene		ND		0.00025	0.00080
1,3,5-Trimethylbenzene		ND		0.00028	0.0016
cis-1,2-Dichloroethene		ND		0.00010	0.00080
m-Xylene & p-Xylene		0.00014	J	0.00013	0.0016
Vinyl chloride		ND		0.00012	0.00080
tert-Butylbenzene		ND		0.00027	0.00080
1,4-Dichlorobenzene		ND		0.00032	0.00080
1,3-Dichloropropane		ND		0.00018	0.00080

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		85 - 120
Toluene-d8 (Surr)	100		85 - 115
Trifluorotoluene (Surr)	88		75 - 125
1,2-Dichloroethane-d4 (Surr)	101		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-16

RS3-SEDØ

Lab Sample ID: 580-15385-16

Date Sampled: 09/08/2009 1110

Client Matrix: Solid

% Moisture: 27.9

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209026.D
Dilution:	1.0			Initial Weight/Volume:	4.23 g
Date Analyzed:	09/22/2009 1857			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.00014	0.0033
1,2,3-Trichloropropane		ND		0.00059	0.0016
1,2-Dibromo-3-Chloropropane		ND		0.00030	0.0033
1,2-Dichloroethane		ND		0.00026	0.0016
1,2-Dichloropropane		ND		0.00028	0.0016
Bromoform		ND		0.00012	0.0016
Bromomethane		ND		0.00063	0.0016
Carbon tetrachloride		ND		0.00061	0.0016
Chloroethane		ND		0.00044	0.0016
Chloroform		ND		0.00024	0.0016
Chloromethane		ND		0.00029	0.0016
cis-1,3-Dichloropropene		ND		0.00019	0.0016
Dichlorobromomethane		ND		0.00012	0.0016
Ethylene Dibromide		ND		0.00022	0.0016
Hexachlorobutadiene		ND		0.00055	0.0016
trans-1,3-Dichloropropene		ND		0.00029	0.0016
Trichloroethene		ND		0.00029	0.0016
1,1,1-Trichloroethane		ND		0.00063	0.0016
Benzene		0.00064	JB	0.00013	0.0016 U
Chlorobromomethane		ND		0.00041	0.0016
Tetrachloroethene		ND		0.00017	0.0016
1,1-Dichloroethane		ND		0.00064	0.0016
1,1,2-Trichloroethane		ND		0.00017	0.0016
Dichlorodifluoromethane		ND		0.00031	0.0016
Methylene Chloride		ND		0.00032	0.0016
n-Butylbenzene		0.0092		0.00051	0.0016
1,2,4-Trimethylbenzene		ND		0.00054	0.0016
2-Chlorotoluene		ND		0.00024	0.0016
Chlorodibromomethane		ND		0.00022	0.0016
Dibromomethane		ND		0.00017	0.0016
1,1-Dichloropropene		ND		0.00064	0.0016
Toluene		0.00079	JB	0.00014	0.0016 U
1,2,4-Trichlorobenzene		ND		0.00063	0.0033
o-Xylene		0.00097	J	0.000087	0.0016
Chlorobenzene		0.0010	JB	0.00029	0.0016 U
1,3-Dichlorobenzene		ND		0.00062	0.0016
Naphthalene		0.0035	J	0.00039	0.0082
Styrene		ND		0.00052	0.0016
4-Chlorotoluene		ND		0.00063	0.0016
trans-1,2-Dichloroethene		ND		0.00047	0.0016
Bromobenzene		ND		0.00026	0.0016
1,2,3-Trichlorobenzene		ND		0.00028	0.0033
1,1-Dichloroethene		ND		0.00023	0.0082
1,2-Dichlorobenzene		0.0023		0.00057	0.0016
1,1,1,2-Tetrachloroethane		ND		0.00014	0.0016
sec-Butylbenzene		0.0065		0.00056	0.0016

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-16

Lab Sample ID: 580-15385-16

Date Sampled: 09/08/2009 1110

Client Matrix: Solid

% Moisture: 27.9

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209026.D
Dilution:	1.0			Initial Weight/Volume:	4.23 g
Date Analyzed:	09/22/2009 1857			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00024	0.0016
Isopropylbenzene		0.0028		0.00024	0.0016
2,2-Dichloropropane		ND		0.00063	0.0016
N-Propylbenzene		0.00072	J	0.00024	0.0016
Trichlorofluoromethane		ND		0.00032	0.0016
4-Isopropyltoluene		0.0020		0.00051	0.0016
1,3,5-Trimethylbenzene		ND		0.00058	0.0033
cis-1,2-Dichloroethene		ND		0.00021	0.0016
m-Xylene & p-Xylene		0.00048	J	0.00026	0.0033
Vinyl chloride		ND		0.00024	0.0016
tert-Butylbenzene		0.00089	J	0.00055	0.0016
1,4-Dichlorobenzene		0.00094	J	0.00065	0.0016
1,3-Dichloropropane		ND		0.00036	0.0016

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	114		85 - 120
Toluene-d8 (Surr)	104		85 - 115
Trifluorotoluene (Surr)	94		75 - 125
1,2-Dichloroethane-d4 (Surr)	96		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-17

RS 4-SED

Lab Sample ID: 580-15385-17

Date Sampled: 09/08/2009 1220

Client Matrix: Solid

% Moisture: 16.5

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209027.D
Dilution:	1.0			Initial Weight/Volume:	5.49 g
Date Analyzed:	09/22/2009 1921			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.000096	0.0022
1,2,3-Trichloropropane		ND		0.00039	0.0011
1,2-Dibromo-3-Chloropropane		ND		0.00020	0.0022
1,2-Dichloroethane		ND		0.00017	0.0011
1,2-Dichloropropane		ND		0.00019	0.0011
Bromoform		ND		0.000079	0.0011
Bromomethane		ND		0.00042	0.0011
Carbon tetrachloride		ND		0.00041	0.0011
Chloroethane		ND		0.00029	0.0011
Chloroform		ND		0.00016	0.0011
Chloromethane		ND		0.00019	0.0011
cis-1,3-Dichloropropene		ND		0.00013	0.0011
Dichlorobromomethane		ND		0.000081	0.0011
Ethylene Dibromide		ND		0.00014	0.0011
Hexachlorobutadiene		ND		0.00037	0.0011
trans-1,3-Dichloropropene		ND		0.00019	0.0011
Trichloroethene		ND		0.00019	0.0011
1,1,1-Trichloroethane		ND		0.00042	0.0011
Benzene		0.00055	JB J	0.000086	0.0011 U
Chlorobromomethane		ND		0.00027	0.0011
Tetrachloroethene		ND		0.00011	0.0011
1,1-Dichloroethane		ND		0.00043	0.0011
1,1,2-Trichloroethane		ND		0.00011	0.0011
Dichlorodifluoromethane		ND		0.00021	0.0011
Methylene Chloride		ND		0.00021	0.0011
n-Butylbenzene		0.018	J	0.00034	0.0011
1,2,4-Trimethylbenzene		ND		0.00036	0.0011
2-Chlorotoluene		ND		0.00016	0.0011
Chlorodibromomethane		ND		0.00015	0.0011
Dibromomethane		ND		0.00011	0.0011
1,1-Dichloropropene		ND		0.00042	0.0011
✓Toluene		0.0014	B J	0.000093	0.0011
1,2,4-Trichlorobenzene		ND		0.00042	0.0022
o-Xylene		ND		0.000058	0.0011
Chlorobenzene		0.0020	B J	0.00019	0.0011 U
1,3-Dichlorobenzene		ND		0.00041	0.0011
Naphthalene		0.0062	J	0.00026	0.0055
Styrene		ND		0.00034	0.0011
4-Chlorotoluene		ND		0.00042	0.0011
trans-1,2-Dichloroethene		ND		0.00031	0.0011
Bromobenzene		ND		0.00017	0.0011
1,2,3-Trichlorobenzene		ND		0.00019	0.0022
1,1-Dichloroethene		ND		0.00015	0.0055
1,2-Dichlorobenzene		0.0019	J	0.00038	0.0011
1,1,1,2-Tetrachloroethane		ND		0.000095	0.0011
sec-Butylbenzene		0.010	J	0.00037	0.0011

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-17

Lab Sample ID: 580-15385-17

Date Sampled: 09/08/2009 1220

Client Matrix: Solid

% Moisture: 16.5


Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch: 580-50646	Lab File ID:	I2209027.D
Dilution:	1.0		Initial Weight/Volume:	5.49 g
Date Analyzed:	09/22/2009 1921		Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00016	0.0011
Isopropylbenzene		0.0025	J	0.00016	0.0011
2,2-Dichloropropane		ND		0.00042	0.0011
N-Propylbenzene		ND		0.00016	0.0011
Trichlorofluoromethane		ND		0.00021	0.0011
4-Isopropyltoluene		0.0041	J	0.00034	0.0011
1,3,5-Trimethylbenzene		ND		0.00038	0.0022
cis-1,2-Dichloroethene		ND		0.00014	0.0011
m-Xylene & p-Xylene		ND		0.00017	0.0022
Vinyl chloride		ND		0.00016	0.0011
tert-Butylbenzene		ND		0.00037	0.0011
1,4-Dichlorobenzene		ND		0.00043	0.0011
1,3-Dichloropropane		ND		0.00024	0.0011

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	127	X	85 - 120
Toluene-d8 (Surr)	109		85 - 115
Trifluorotoluene (Surr)	95		75 - 125
1,2-Dichloroethane-d4 (Surr)	98		75 - 125

 11-6-09

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-18

RS4-SED4

Lab Sample ID: 580-15385-18

Date Sampled: 09/08/2009 1225

Client Matrix: Solid

% Moisture: 13.4

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch:	580-50646	Lab File ID:	I2209028.D
Dilution:	1.0			Initial Weight/Volume:	7.39 g
Date Analyzed:	09/22/2009 1944			Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
1,1,2,2-Tetrachloroethane		ND		0.000069	0.0016
1,2,3-Trichloropropane		ND		0.00028	0.00078
1,2-Dibromo-3-Chloropropane		ND		0.00014	0.0016
1,2-Dichloroethane		ND		0.00012	0.00078
1,2-Dichloropropane		ND		0.00013	0.00078
Bromoform		ND		0.000056	0.00078
Bromomethane		ND		0.00030	0.00078
Carbon tetrachloride		ND		0.00029	0.00078
Chloroethane		ND		0.00021	0.00078
Chloroform		ND		0.00012	0.00078
Chloromethane		ND		0.00014	0.00078
cis-1,3-Dichloropropene		ND		0.000091	0.00078
Dichlorobromomethane		ND		0.000058	0.00078
Ethylene Dibromide		ND		0.00010	0.00078
Hexachlorobutadiene		ND		0.00026	0.00078
trans-1,3-Dichloropropene		ND		0.00014	0.00078
Trichloroethene		ND		0.00014	0.00078
1,1,1-Trichloroethane		ND		0.00030	0.00078
Benzene		0.00011	JB	0.000062	0.00078 U
Chlorobromomethane		ND		0.00019	0.00078
Tetrachloroethene		ND		0.000080	0.00078
1,1-Dichloroethane		ND		0.00031	0.00078
1,1,2-Trichloroethane		ND		0.000079	0.00078
Dichlorodifluoromethane		ND		0.00015	0.00078
Methylene Chloride		ND		0.00015	0.00078
n-Butylbenzene		ND		0.00025	0.00078
1,2,4-Trimethylbenzene		ND		0.00026	0.00078
2-Chlorotoluene		ND		0.00011	0.00078
Chlorodibromomethane		ND		0.00011	0.00078
Dibromomethane		ND		0.000082	0.00078
1,1-Dichloropropene		ND		0.00030	0.00078
Toluene		0.00016	JB	0.000066	0.00078 U
1,2,4-Trichlorobenzene		ND		0.00030	0.0016
o-Xylene		0.000049	J	0.000041	0.00078
Chlorobenzene		0.00025	JB	0.00014	0.00078 U
1,3-Dichlorobenzene		ND		0.00030	0.00078
Naphthalene		ND		0.00019	0.0039
Styrene		ND		0.00025	0.00078
4-Chlorotoluene		ND		0.00030	0.00078
trans-1,2-Dichloroethene		ND		0.00022	0.00078
Bromobenzene		ND		0.00012	0.00078
1,2,3-Trichlorobenzene		ND		0.00013	0.0016
1,1-Dichloroethene		ND		0.00011	0.0039
1,2-Dichlorobenzene		ND		0.00027	0.00078
1,1,1,2-Tetrachloroethane		ND		0.000068	0.00078
sec-Butylbenzene		ND		0.00027	0.00078

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-18

Lab Sample ID: 580-15385-18

Date Sampled: 09/08/2009 1225

Client Matrix: Solid

% Moisture: 13.4

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 580-50716	Instrument ID:	SEA015
Preparation:	5035	Prep Batch: 580-50646	Lab File ID:	I2209028.D
Dilution:	1.0		Initial Weight/Volume:	7.39 g
Date Analyzed:	09/22/2009 1944		Final Weight/Volume:	5 mL
Date Prepared:	09/22/2009 0732			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		0.00012	0.00078
Isopropylbenzene		ND		0.00012	0.00078
2,2-Dichloropropane		ND		0.00030	0.00078
N-Propylbenzene		ND		0.00011	0.00078
Trichlorofluoromethane		ND		0.00015	0.00078
4-Isopropyltoluene		ND		0.00024	0.00078
1,3,5-Trimethylbenzene		ND		0.00027	0.0016
cis-1,2-Dichloroethene		ND		0.000099	0.00078
m-Xylene & p-Xylene		ND		0.00012	0.0016
Vinyl chloride		ND		0.00012	0.00078
tert-Butylbenzene		ND		0.00026	0.00078
1,4-Dichlorobenzene		ND		0.00031	0.00078
1,3-Dichloropropane		ND		0.00017	0.00078

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		85 - 120
Toluene-d8 (Surr)	101		85 - 115
Trifluorotoluene (Surr)	91		75 - 125
1,2-Dichloroethane-d4 (Surr)	92		75 - 125

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-19

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Lab Sample ID: 580-15385-19TB

Date Sampled: 09/08/2009 0000

Client Matrix: Solid

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 580-51100

Instrument ID: TAC043

Preparation: 5035

Prep Batch: 580-51093

Lab File ID: VB00118435.D

Dilution: 1.0

Initial Weight/Volume: 10 g

Date Analyzed: 09/29/2009 2121

Final Weight/Volume: 400 mL

Date Prepared: 09/29/2009 1454

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		ND	H	8.0	40
Chloromethane		ND	H	60	400
Vinyl chloride		ND	H	1.7	8.0
Bromomethane		ND	H	25	140
Chloroethane		ND	H	23	400
Trichlorofluoromethane		ND	H	5.0	40
1,1-Dichloroethene		ND	H	5.0	20
Methylene Chloride		7.9	H	3.8	40
trans-1,2-Dichloroethene		ND	H	3.5	40
1,1-Dichloroethane		ND	H	3.8	40
2,2-Dichloropropane		ND	H	3.7	40
cis-1,2-Dichloroethene		ND	H	2.4	40
Chlorobromomethane		ND	H	12	40
Chloroform		ND	H	2.1	40
1,1,1-Trichloroethane		ND	H	5.0	40
Carbon tetrachloride		ND	H	3.7	20
1,1-Dichloropropene		ND	H	1.8	40
Benzene		ND	H	2.5	16
1,2-Dichloroethane		ND	H	2.2	40
Trichloroethene		ND	H	3.4	16
1,2-Dichloropropane		ND	H	3.9	12
Dibromomethane		ND	H	4.0	40
Dichlorobromomethane		ND	H	3.0	40
cis-1,3-Dichloropropene		ND	H	2.4	16
Toluene		ND	H	2.4	40
trans-1,3-Dichloropropene		ND	H	4.0	16
1,1,2-Trichloroethane		ND	H	1.8	12
Tetrachloroethene		ND	H	2.1	20
1,3-Dichloropropane		ND	H	5.0	40
Chlorodibromomethane		ND	H	8.0	40
Ethylene Dibromide		ND	H	3.2	40
Chlorobenzene		ND	H	2.3	40
Ethylbenzene		ND	H	3.7	40
1,1,1,2-Tetrachloroethane		ND	H	4.8	40
1,1,2,2-Tetrachloroethane		ND	H	3.3	10
m-Xylene & p-Xylene		ND	H	7.8	40
o-Xylene		ND	H	2.3	40
Styrene		ND	H	3.8	40
Bromoform		ND	H	11	40
Isopropylbenzene		ND	H	1.8	40
Bromobenzene		ND	H	2.7	40
N-Propylbenzene		ND	H	2.8	40
1,2,3-Trichloropropane		ND	H	12	40
2-Chlorotoluene		ND	H	5.4	40
1,3,5-Trimethylbenzene		4.4	H	4.2	40
4-Chlorotoluene		ND	H	13	40

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-19

Lab Sample ID: 580-15385-19TB

Client Matrix: Solid

Date Sampled: 09/08/2009 0000

Date Received: 09/11/2009 0940

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	580-51100	Instrument ID:	TAC043
Preparation:	5035	Prep Batch:	580-51093	Lab File ID:	VB00118435.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Date Analyzed:	09/29/2009 2121			Final Weight/Volume:	400 mL
Date Prepared:	09/29/2009 1454				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
tert-Butylbenzene		ND	H UJ	3.2	40
1,2,4-Trimethylbenzene		ND	H	2.1	40
sec-Butylbenzene		ND	H	5.0	40
1,3-Dichlorobenzene		ND	H	5.0	40
4-Isopropyltoluene		ND	H	2.8	40
1,4-Dichlorobenzene		ND	H	5.0	40
n-Butylbenzene		21	J H J	7.3	40
1,2-Dichlorobenzene		ND	H UJ	2.6	40
1,2-Dibromo-3-Chloropropane		ND	H UJ	66	200
1,2,4-Trichlorobenzene		33	J H J	5.0	40
1,2,3-Trichlorobenzene		73	H UJ	5.0	40
Hexachlorobutadiene		120	H	5.6	40
Naphthalene		ND	H	6.0	40

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorobenzene (Surr)	105		75 - 125
Toluene-d8 (Surr)	99		85 - 115
Ethylbenzene-d10	105		75 - 125
4-Bromofluorobenzene (Surr)	100		85 - 120
Trifluorotoluene (Surr)	88		75 - 125

Estimated Qualifier (J/UJ)
applied due to
exceedance of Hold Time
TRG

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-01

6-RS1-SED 4

Lab Sample ID: 580-15385-1

Date Sampled: 09/07/2009 1350

Client Matrix: Solid

% Moisture: 18.6

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15235.D
Dilution:	10			Initial Weight/Volume:	20.6970 g
Date Analyzed:	09/18/2009 0942			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0088	0.12
Bis(2-chloroethyl)ether		ND		0.012	0.12
2-Chlorophenol		ND		0.0088	0.12
1,3-Dichlorobenzene		ND	UT	0.0085	0.059
1,4-Dichlorobenzene		ND		0.0038	0.059
Benzyl alcohol		ND		0.011	0.12
1,2-Dichlorobenzene		ND		0.0076	0.059
2-Methylphenol		ND		0.0084	0.12
3 & 4 Methylphenol		ND		0.0066	0.24
N-Nitrosodi-n-propylamine		ND		0.012	0.12
Hexachloroethane		ND		0.013	0.12
Nitrobenzene		ND		0.034	0.12
Isophorone		ND		0.0049	0.12
2-Nitrophenol		ND	UT	0.0051	0.12
2,4-Dimethylphenol		ND		0.0025	0.12
Benzoic acid		ND		0.77	3.0
Bis(2-chloroethoxy)methane		ND		0.0036	0.12
2,4-Dichlorophenol		ND		0.0036	0.12
1,2,4-Trichlorobenzene		ND		0.014	0.059
Naphthalene		0.019	J	0.0026	0.024 ✓
4-Chloroaniline		ND		0.013	0.12
Hexachlorobutadiene		ND		0.011	0.059
4-Chloro-3-methylphenol		ND		0.0084	0.12
2-Methylnaphthalene		0.021	J	0.0027	0.024 ✓
Hexachlorocyclopentadiene		ND	UT	0.0031	0.12
2,4,6-Trichlorophenol		ND		0.0047	0.18
2,4,5-Trichlorophenol		ND		0.0051	0.12
2-Chloronaphthalene		ND		0.0021	0.024
2-Nitroaniline		ND		0.0050	0.12
Dimethyl phthalate		ND		0.0050	0.12
Acenaphthylene		ND		0.0019	0.024 ✓
2,6-Dinitrotoluene		ND		0.0049	0.12
3-Nitroaniline		ND		0.0069	0.12
Acenaphthene		ND		0.0019	0.024 ✓
2,4-Dinitrophenol		ND	UT	0.017	1.2
4-Nitrophenol		ND		0.20	1.2
Dibenzofuran		0.015	J	0.0018	0.12
2,4-Dinitrotoluene		ND		0.0030	0.12
Diethyl phthalate		ND		0.018	0.12
4-Chlorophenyl phenyl ether		ND		0.0068	0.12
Fluorene		ND		0.0014	0.024 ✓
4-Nitroaniline		ND		0.017	0.12
4,6-Dinitro-2-methylphenol		ND		0.021	1.2
N-Nitrosodiphenylamine		ND		0.0026	0.059
4-Bromophenyl phenyl ether		ND		0.0039	0.12
Hexachlorobenzene		ND		0.0045	0.059

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-01

Lab Sample ID: 580-15385-1

Date Sampled: 09/07/2009 1350

Client Matrix: Solid

% Moisture: 18.6

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15235.D
Dilution:	10		Initial Weight/Volume:	20.6970 g
Date Analyzed:	09/18/2009 0942		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.014	0.12
Phenanthrene		0.040		0.0025	0.024
Anthracene		0.014	J	0.0017	0.024
Di-n-butyl phthalate		ND		0.031	0.24
Fluoranthene		0.040	*	0.0014	0.024
Pyrene		0.047		0.0017	0.024
Butyl benzyi phthalate		ND		0.037	0.12
3,3'-Dichlorobenzidine		ND		0.0094	0.24
Benzo[a]anthracene		0.012	J	0.0020	0.030
Chrysene		0.029	J	0.0017	0.030
Bis(2-ethylhexyl) phthalate		ND		0.050	1.8
Di-n-octyl phthalate		ND		0.0015	0.24
Benzo[a]pyrene		ND		0.0025	0.036
Indeno[1,2,3-cd]pyrene		0.035	J	0.0050	0.047
Dibenz(a,h)anthracene		ND		0.0026	0.047
Benzo[g,h,i]perylene		0.022	J	0.0018	0.030
Carbazole		ND		0.0051	0.18
1-Methylnaphthalene		0.0086	J	0.0021	0.036
Benzo[b]fluoranthene		ND		0.0049	0.024
Benzo[k]fluoranthene		ND		0.0015	0.030
2,2'-oxybis[1-chloropropane]		ND		0.0080	0.18

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	74		36 - 145
Phenol-d5	82		38 - 149
Nitrobenzene-d5	68		38 - 141
2-Fluorobiphenyl	76		42 - 140
2,4,6-Tribromophenol	96		28 - 143
Terphenyl-d14	96		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SS10049-02

G-RS1-SED Ø

Lab Sample ID: 580-15385-2

Date Sampled: 09/07/2009 1355

Client Matrix: Solid

% Moisture: 31.0

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15236.D
Dilution:	10		Initial Weight/Volume:	20.2421 g
Date Analyzed:	09/18/2009 1002		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.011	0.14
Bis(2-chloroethyl)ether		ND		0.014	0.14
2-Chlorophenol		ND		0.011	0.14
1,3-Dichlorobenzene		ND UJ		0.010	0.072
1,4-Dichlorobenzene		ND		0.0046	0.072
Benzyl alcohol		ND		0.014	0.14
1,2-Dichlorobenzene		ND		0.0092	0.072
2-Methylphenol		ND		0.010	0.14
3 & 4 Methylphenol		ND		0.0080	0.29
N-Nitrosodi-n-propylamine		ND		0.014	0.14
Hexachloroethane		ND		0.016	0.14
Nitrobenzene		ND		0.042	0.14
Isophorone		ND		0.0059	0.14
2-Nitrophenol		ND UJ		0.0062	0.14
2,4-Dimethylphenol		ND		0.0030	0.14
Benzoic acid		ND		0.93	3.6
Bis(2-chloroethoxy)methane		ND		0.0043	0.14
2,4-Dichlorophenol		ND		0.0043	0.14
1,2,4-Trichlorobenzene		ND		0.017	0.072
Naphthalene		ND		0.0032	0.029
4-Chloroaniline		ND		0.016	0.14
Hexachlorobutadiene		ND		0.013	0.072
4-Chloro-3-methylphenol		ND		0.010	0.14
2-Methylnaphthalene		0.0069	J	0.0033	0.029
Hexachlorocyclopentadiene		ND UJ		0.0037	0.14
2,4,6-Trichlorophenol		ND		0.0057	0.21
2,4,5-Trichlorophenol		ND		0.0062	0.14
2-Chloronaphthalene		ND		0.0026	0.029
2-Nitroaniline		ND		0.0060	0.14
Dimethyl phthalate		ND		0.0060	0.14
Acenaphthylene		ND		0.0023	0.029
2,6-Dinitrotoluene		ND		0.0059	0.14
3-Nitroaniline		ND		0.0083	0.14
Acenaphthene		ND		0.0023	0.029
2,4-Dinitrophenol		ND UJ		0.020	1.4
4-Nitrophenol		ND		0.24	1.4
Dibenzofuran		ND		0.0021	0.14
2,4-Dinitrotoluene		ND		0.0036	0.14
Diethyl phthalate		ND		0.021	0.14
4-Chlorophenyl phenyl ether		ND		0.0082	0.14
Fluorene		ND		0.0017	0.029
4-Nitroaniline		ND		0.020	0.14
4,6-Dinitro-2-methylphenol		ND		0.026	1.4
N-Nitrosodiphenylamine		ND		0.0032	0.072
4-Bromophenyl phenyl ether		ND		0.0047	0.14
Hexachlorobenzene		ND		0.0054	0.072

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-02

Lab Sample ID: 580-15385-2

Date Sampled: 09/07/2009 1355

Client Matrix: Solid

% Moisture: 31.0

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15236.D
Dilution:	10		Initial Weight/Volume:	20.2421 g
Date Analyzed:	09/18/2009 1002		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.017	0.14
Phenanthrene		0.017	J	0.0030	0.029
Anthracene		0.0078	J	0.0020	0.029
Di-n-butyl phthalate		ND		0.037	0.29
Fluoranthene		0.016	J*	0.0017	0.029
Pyrene		0.013	J	0.0020	0.029
Butyl benzyl phthalate		ND		0.044	0.14
3,3'-Dichlorobenzidine		ND		0.011	0.29
Benzo[a]anthracene		0.040		0.0024	0.036
Chrysene		0.0098	J	0.0020	0.036
Bis(2-ethylhexyl) phthalate		ND		0.060	2.1
Di-n-octyl phthalate		ND		0.0019	0.29
Benzo[a]pyrene		0.0066	J	0.0030	0.043
Indeno[1,2,3-cd]pyrene		0.024	J	0.0060	0.057
Dibenz(a,h)anthracene		ND		0.0032	0.057
Benzo[g,h,i]perylene		ND		0.0021	0.036
Carbazole		ND		0.0062	0.21
1-Methylnaphthalene		ND		0.0026	0.043
Benzo[b]fluoranthene		ND		0.0059	0.029
Benzo[k]fluoranthene		ND		0.0019	0.036
2,2'-oxybis[1-chloropropane]		ND		0.0096	0.21

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	73		36 - 145
Phenol-d5	80		38 - 149
Nitrobenzene-d5	65		38 - 141
2-Fluorobiphenyl	43		42 - 140
2,4,6-Tribromophenol	55		28 - 143
Terphenyl-d14	79		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-05

G-RS7-SED Ø

Lab Sample ID: 580-15385-5

Date Sampled: 09/07/2009 1530

Client Matrix: Solid

% Moisture: 30.8

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15239.D
Dilution:	1.0		Initial Weight/Volume:	20.0088 g
Date Analyzed:	09/18/2009 1104		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0011	0.014
Bis(2-chloroethyl)ether		ND		0.0014	0.014
2-Chlorophenol		ND		0.0011	0.014
1,3-Dichlorobenzene		ND <i>UT</i>		0.0010	0.0072
1,4-Dichlorobenzene		ND		0.00046	0.0072
Benzyl alcohol		ND		0.0014	0.014
1,2-Dichlorobenzene		ND		0.00093	0.0072
2-Methylphenol		ND		0.0010	0.014
3 & 4 Methylphenol		0.0071	J	0.00081	0.029
N-Nitrosodi-n-propylamine		ND		0.0014	0.014
Hexachloroethane		ND		0.0016	0.014
Nitrobenzene		ND		0.0042	0.014
Isophorone		ND		0.00059	0.014
2-Nitrophenol		ND <i>UT</i>		0.00062	0.014
2,4-Dimethylphenol		ND		0.00030	0.014
Benzoic acid		ND		0.094	0.36
Bis(2-chloroethoxy)methane		ND		0.00043	0.014
2,4-Dichlorophenol		ND		0.00043	0.014
1,2,4-Trichlorobenzene		ND		0.0017	0.0072
Naphthalene		ND		0.00032	0.0029
4-Chloroaniline		ND		0.0016	0.014
Hexachlorobutadiene		ND		0.0013	0.0072
4-Chloro-3-methylphenol		ND		0.0010	0.014
2-Methylnaphthalene		0.00044	J	0.00033	0.0029
Hexachlorocyclopentadiene		ND <i>UT</i>		0.00038	0.014
2,4,6-Trichlorophenol		ND		0.00058	0.022
2,4,5-Trichlorophenol		ND		0.00062	0.014
2-Chloronaphthalene		ND		0.00026	0.0029
2-Nitroaniline		ND		0.00061	0.014
Dimethyl phthalate		ND		0.00061	0.014
Acenaphthylene		ND		0.00023	0.0029
2,6-Dinitrotoluene		ND		0.00059	0.014
3-Nitroaniline		ND		0.00084	0.014
Acenaphthene		ND		0.00023	0.0029
2,4-Dinitrophenol		ND <i>UT</i>		0.0020	0.14
4-Nitrophenol		ND		0.025	0.14
Dibenzofuran		ND		0.00022	0.014
2,4-Dinitrotoluene		ND		0.00036	0.014
Diethyl phthalate		0.0081	<i>JB</i>	0.0022	0.014 <i>U</i>
4-Chlorophenyl phenyl ether		ND		0.00082	0.014
Fluorene		ND		0.00017	0.0029
4-Nitroaniline		ND		0.0020	0.014
4,6-Dinitro-2-methylphenol		ND		0.0026	0.14
N-Nitrosodiphenylamine		ND		0.00032	0.0072
4-Bromophenyl phenyl ether		ND		0.00048	0.014
Hexachlorobenzene		ND		0.00055	0.0072

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-05

Lab Sample ID: 580-15385-5

Date Sampled: 09/07/2009 1530

Client Matrix: Solid

% Moisture: 30.8

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15239.D
Dilution:	1.0		Initial Weight/Volume:	20.0088 g
Date Analyzed:	09/18/2009 1104		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0017	0.014
Phenanthrene		0.0081		0.00030	0.0029
Anthracene		0.0012	J	0.00020	0.0029
Di-n-butyl phthalate		0.014	JB	0.0038	0.029 u
Fluoranthene		0.014	*	0.00017	0.0029
Pyrene		0.012		0.00020	0.0029
Butyl benzyl phthalate		ND		0.0045	0.014
3,3'-Dichlorobenzidine		ND		0.0011	0.029
Benzo[a]anthracene		0.0022	J	0.00025	0.0036
Chrysene		0.0054		0.00020	0.0036
Bis(2-ethylhexyl) phthalate		ND		0.0061	0.22
Di-n-octyl phthalate		ND		0.00019	0.029
Benzo[a]pyrene		ND		0.00030	0.0043
Indeno[1,2,3-cd]pyrene		ND		0.00061	0.0058
Dibenz(a,h)anthracene		ND		0.00032	0.0058
Benzo[g,h,i]perylene		ND		0.00022	0.0036
Carbazole		ND		0.00062	0.022
1-Methylnaphthalene		ND		0.00026	0.0043
Benzo[b]fluoranthene		0.0024	J	0.00059	0.0029
Benzo[k]fluoranthene		ND		0.00019	0.0036
2,2'-oxybis[1-chloropropane]		ND		0.00097	0.022

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	76		36 - 145
Phenol-d5	80		38 - 149
Nitrobenzene-d5	57		38 - 141
2-Fluorobiphenyl	29	X	42 - 140
2,4,6-Tribromophenol	66		28 - 143
Terphenyl-d14	65		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-06

G-RS7-SED 4

Lab Sample ID: 580-15385-6

Date Sampled: 09/07/2009 1525

Client Matrix: Solid

% Moisture: 18.2

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15255.D
Dilution:	1.0			Initial Weight/Volume:	20.4306 g
Date Analyzed:	09/18/2009 1633			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.00089	0.012
Bis(2-chloroethyl)ether		ND		0.0012	0.012
2-Chlorophenol		ND		0.00089	0.012
1,3-Dichlorobenzene		ND UT		0.00086	0.0060
1,4-Dichlorobenzene		ND		0.00038	0.0060
Benzyl alcohol		ND		0.0011	0.012
1,2-Dichlorobenzene		ND		0.00077	0.0060
2-Methylphenol		ND		0.00085	0.012
3 & 4 Methylphenol		ND		0.00067	0.024
N-Nitrosodi-n-propylamine		ND		0.0012	0.012
Hexachloroethane		ND		0.0013	0.012
Nitrobenzene		ND		0.0035	0.012
Isophorone		ND		0.00049	0.012
2-Nitrophenol		ND UT		0.00051	0.012
2,4-Dimethylphenol		ND		0.00025	0.012
Benzoic acid		ND		0.078	0.30
Bis(2-chloroethoxy)methane		ND		0.00036	0.012
2,4-Dichlorophenol		ND		0.00036	0.012
1,2,4-Trichlorobenzene		ND		0.0014	0.0060
Naphthalene		ND		0.00026	0.0024
4-Chloroaniline		ND		0.0013	0.012
Hexachlorobutadiene		ND		0.0011	0.0060
4-Chloro-3-methylphenol		ND		0.00085	0.012
2-Methylnaphthalene		0.00035	J	0.00028	0.0024
Hexachlorocyclopentadiene		ND UT		0.00031	0.012
2,4,6-Trichlorophenol		ND		0.00048	0.018
2,4,5-Trichlorophenol		ND		0.00051	0.012
2-Chloronaphthalene		ND		0.00022	0.0024
2-Nitroaniline		ND		0.00050	0.012
Dimethyl phthalate		ND		0.00050	0.012
Acenaphthylene		ND		0.00019	0.0024
2,6-Dinitrotoluene		ND		0.00049	0.012
3-Nitroaniline		ND		0.00069	0.012
Acenaphthene		ND		0.00019	0.0024
2,4-Dinitrophenol		ND UT		0.0017	0.12
4-Nitrophenol		ND		0.020	0.12
Dibenzofuran		ND		0.00018	0.012
2,4-Dinitrotoluene		ND		0.00030	0.012
Diethyl phthalate		0.0040	JB	0.0018	0.012 U
4-Chlorophenyl phenyl ether		ND		0.00068	0.012
Fluorene		ND		0.00014	0.0024
4-Nitroaniline		ND		0.0017	0.012
4,6-Dinitro-2-methylphenol		ND		0.0022	0.12
N-Nitrosodiphenylamine		ND		0.00026	0.0060
4-Bromophenyl phenyl ether		ND		0.00039	0.012
Hexachlorobenzene		ND		0.00045	0.0060

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-06

Lab Sample ID: 580-15385-6

Date Sampled: 09/07/2009 1525

Client Matrix: Solid

% Moisture: 18.2

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15255.D
Dilution:	1.0		Initial Weight/Volume:	20.4306 g
Date Analyzed:	09/18/2009 1633		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0014	0.012
Phenanthrene		0.00053	J	0.00025	0.0024
Anthracene		0.00036	J	0.00017	0.0024
Di-n-butyl phthalate		0.015	J	0.0031	0.024 <i>u</i>
Fluoranthene		0.00036	J*	0.00014	0.0024
Pyrene		0.00072	J	0.00017	0.0024
Butyl benzyl phthalate		ND		0.0037	0.012
3,3'-Dichlorobenzidine		ND		0.00094	0.024
Benzo[a]anthracene		0.00066	J	0.00020	0.0030
Chrysene		ND		0.00017	0.0030
Bis(2-ethylhexyl) phthalate		ND		0.0050	0.18
Di-n-octyl phthalate		ND		0.00016	0.024
Benzo[a]pyrene		ND		0.00025	0.0036
Indeno[1,2,3-cd]pyrene		ND		0.00050	0.0048
Dibenz(a,h)anthracene		ND		0.00026	0.0048
Benzo[g,h,i]perylene		ND		0.00018	0.0030
Carbazole		ND		0.00051	0.018
1-Methylnaphthalene		ND		0.00022	0.0036
Benzo[b]fluoranthene		ND		0.00049	0.0024
Benzo[k]fluoranthene		ND		0.00016	0.0030
2,2'-oxybis[1-chloropropane]		ND		0.00080	0.018

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	53		36 - 145
Phenol-d5	70		38 - 149
Nitrobenzene-d5	40		38 - 141
2-Fluorobiphenyl	53		42 - 140
2,4,6-Tribromophenol	70		28 - 143
Terphenyl-d14	102		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-04

G-RS8-SED

Lab Sample ID: 580-15385-4

Date Sampled: 09/07/2009 1450

Client Matrix: Solid

% Moisture: 33.1

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15238.D
Dilution:	1.0			Initial Weight/Volume:	20.3292 g
Date Analyzed:	09/18/2009 1044			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0011	0.015
Bis(2-chloroethyl)ether		ND		0.0015	0.015
2-Chlorophenol		ND		0.0011	0.015
1,3-Dichlorobenzene		ND UT		0.0011	0.0074
1,4-Dichlorobenzene		ND		0.00047	0.0074
Benzyl alcohol		0.0017	J	0.0014	0.015
1,2-Dichlorobenzene		ND		0.00094	0.0074
2-Methylphenol		ND		0.0010	0.015
3 & 4 Methylphenol		ND		0.00082	0.029
N-Nitrosodi-n-propylamine		ND		0.0014	0.015
Hexachloroethane		ND		0.0016	0.015
Nitrobenzene		ND		0.0043	0.015
Isophorone		ND		0.00060	0.015
2-Nitrophenol		ND UT		0.00063	0.015
2,4-Dimethylphenol		ND		0.00031	0.015
Benzoic acid		ND		0.096	0.37
Bis(2-chloroethoxy)methane		ND		0.00044	0.015
2,4-Dichlorophenol		ND		0.00044	0.015
1,2,4-Trichlorobenzene		ND		0.0018	0.0074
Naphthalene		ND		0.00032	0.0029
4-Chloroaniline		ND		0.0016	0.015
Hexachlorobutadiene		ND		0.0013	0.0074
4-Chloro-3-methylphenol		ND		0.0010	0.015
2-Methylnaphthalene		ND		0.00034	0.0029
Hexachlorocyclopentadiene		ND UT		0.00038	0.015
2,4,6-Trichlorophenol		ND		0.00059	0.022
2,4,5-Trichlorophenol		ND		0.00063	0.015
2-Chloronaphthalene		ND		0.00026	0.0029
2-Nitroaniline		ND		0.00062	0.015
Dimethyl phthalate		ND		0.00062	0.015
Acenaphthylene		ND		0.00024	0.0029
2,6-Dinitrotoluene		ND		0.00060	0.015
3-Nitroaniline		ND		0.00085	0.015
Acenaphthene		ND		0.00024	0.0029
2,4-Dinitrophenol		ND UT		0.0021	0.15
4-Nitrophenol		ND		0.025	0.15
Dibenzofuran		ND		0.00022	0.015
2,4-Dinitrotoluene		ND		0.00037	0.015
Diethyl phthalate		0.0048	JB	0.0022	0.015 U
4-Chlorophenyl phenyl ether		ND		0.00084	0.015
Fluorene		ND		0.00018	0.0029
4-Nitroaniline		ND		0.0021	0.015
4,6-Dinitro-2-methylphenol		ND		0.0026	0.15
N-Nitrosodiphenylamine		ND		0.00032	0.0074
4-Bromophenyl phenyl ether		ND		0.00049	0.015
Hexachlorobenzene		ND		0.00056	0.0074

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-04

Lab Sample ID: 580-15385-4

Date Sampled: 09/07/2009 1450

Client Matrix: Solid

% Moisture: 33.1

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15238.D
Dilution:	1.0		Initial Weight/Volume:	20.3292 g
Date Analyzed:	09/18/2009 1044		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0018	0.015
Phenanthrene		ND		0.00031	0.0029
Anthracene		ND		0.00021	0.0029
Di-n-butyl phthalate		0.011	JB	0.0038	0.029
Fluoranthene		0.0011	J*	0.00018	0.0029
Pyrene		0.0010	J	0.00021	0.0029
Butyl benzyl phthalate		ND		0.0046	0.015
3,3'-Dichlorobenzidine		ND		0.0012	0.029
Benzo[a]anthracene		0.00087	J	0.00025	0.0037
Chrysene		ND		0.00021	0.0037
Bis(2-ethylhexyl) phthalate		ND		0.0062	0.22
Di-n-octyl phthalate		ND		0.00019	0.029
Benzo[a]pyrene		ND		0.00031	0.0044
Indeno[1,2,3-cd]pyrene		ND		0.00062	0.0059
Dibenz(a,h)anthracene		ND		0.00032	0.0059
Benzo[g,h,i]perylene		ND		0.00022	0.0037
Carbazole		ND		0.00063	0.022
1-Methylnaphthalene		ND		0.00026	0.0044
Benzo[b]fluoranthene		ND		0.00060	0.0029
Benzo[k]fluoranthene		ND		0.00019	0.0037
2,2'-oxybis[1-chloropropane]		ND		0.00099	0.022

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	70		36 - 145
Phenol-d5	74		38 - 149
Nitrobenzene-d5	56		38 - 141
2-Fluorobiphenyl	22	X	42 - 140
2,4,6-Tribromophenol	51		28 - 143
Terphenyl-d14	52		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-03

G-RS8-SE03

Lab Sample ID: 580-15385-3

Date Sampled: 09/07/2009 1445

Client Matrix: Solid

% Moisture: 17.4

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15237.D
Dilution:	1.0			Initial Weight/Volume:	20.7951 g
Date Analyzed:	09/18/2009 1023			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.00086	0.012
Bis(2-chloroethyl)ether		ND		0.0012	0.012
2-Chlorophenol		ND		0.00086	0.012
1,3-Dichlorobenzene		ND <i>UJ</i>		0.00084	0.0058
1,4-Dichlorobenzene		ND		0.00037	0.0058
Benzyl alcohol		ND		0.0011	0.012
1,2-Dichlorobenzene		ND		0.00075	0.0058
2-Methylphenol		ND		0.00083	0.012
3 & 4 Methylphenol		ND		0.00065	0.023
N-Nitrosodi-n-propylamine		ND		0.0011	0.012
Hexachloroethane		ND		0.0013	0.012
Nitrobenzene		ND		0.0034	0.012
Isophorone		ND		0.00048	0.012
2-Nitrophenol		ND <i>UJ</i>		0.00050	0.012
2,4-Dimethylphenol		ND		0.00024	0.012
Benzoic acid		ND		0.076	0.29
Bis(2-chloroethoxy)methane		ND		0.00035	0.012
2,4-Dichlorophenol		ND		0.00035	0.012
1,2,4-Trichlorobenzene		ND		0.0014	0.0058
Naphthalene		0.00048	J	0.00026	0.0023
4-Chloroaniline		ND		0.0013	0.012
Hexachlorobutadiene		ND		0.0011	0.0058
4-Chloro-3-methylphenol		ND		0.00083	0.012
2-Methylnaphthalene		0.00071	J	0.00027	0.0023
Hexachlorocyclopentadiene		ND <i>UJ</i>		0.00030	0.012
2,4,6-Trichlorophenol		ND		0.00047	0.017
2,4,5-Trichlorophenol		ND		0.00050	0.012
2-Chloronaphthalene		ND		0.00021	0.0023
2-Nitroaniline		ND		0.00049	0.012
Dimethyl phthalate		ND		0.00049	0.012
Acenaphthylene		ND		0.00019	0.0023
2,6-Dinitrotoluene		ND		0.00048	0.012
3-Nitroaniline		ND		0.00068	0.012
Acenaphthene		ND		0.00019	0.0023
2,4-Dinitrophenol		ND <i>UJ</i>		0.0016	0.12
4-Nitrophenol		ND <i>UJ</i>		0.020	0.12
Dibenzofuran		ND		0.00017	0.012
2,4-Dinitrotoluene		ND		0.00029	0.012
Diethyl phthalate		0.0030	<i>JB</i>	0.0017	0.012 <i>U</i>
4-Chlorophenyl phenyl ether		ND		0.00066	0.012
Fluorene		ND		0.00014	0.0023
4-Nitroaniline		ND		0.0016	0.012
4,6-Dinitro-2-methylphenol		ND		0.0021	0.12
N-Nitrosodiphenylamine		ND		0.00026	0.0058
4-Bromophenyl phenyl ether		ND		0.00038	0.012
Hexachlorobenzene		ND		0.00044	0.0058

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-03

Lab Sample ID: 580-15385-3

Date Sampled: 09/07/2009 1445

Client Matrix: Solid

% Moisture: 17.4

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15237.D
Dilution:	1.0		Initial Weight/Volume:	20.7951 g
Date Analyzed:	09/18/2009 1023		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0014	0.012
Phenanthrene		ND		0.00024	0.0023
Anthracene		ND		0.00016	0.0023
Di-n-butyl phthalate		0.01T	JB	0.0030	0.023 u
Fluoranthene		0.00066	J*	0.00014	0.0023
Pyrene		0.00078	J	0.00016	0.0023
Butyl benzyl phthalate		ND		0.0036	0.012
3,3'-Dichlorobenzidine		ND		0.00092	0.023
Benzo[a]anthracene		ND		0.00020	0.0029
Chrysene		ND		0.00016	0.0029
Bis(2-ethylhexyl) phthalate		ND		0.0049	0.17
Di-n-octyl phthalate		ND		0.00015	0.023
Benzo[a]pyrene		ND		0.00024	0.0035
Indeno[1,2,3-cd]pyrene		ND		0.00049	0.0047
Dibenz(a,h)anthracene		ND		0.00026	0.0047
Benzo[g,h,i]perylene		ND		0.00017	0.0029
Carbazole		0.00075	J	0.00050	0.017
1-Methylnaphthalene		0.00027	J	0.00021	0.0035
Benzo[b]fluoranthene		ND		0.00048	0.0023
Benzo[k]fluoranthene		ND		0.00015	0.0029
2,2'-oxybis[1-chloropropane]		ND		0.00078	0.017

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	74		36 - 145
Phenol-d5	80		38 - 149
Nitrobenzene-d5	62		38 - 141
2-Fluorobiphenyl	31	X	42 - 140
2,4,6-Tribromophenol	86		28 - 143
Terphenyl-d14	83		42 - 151

Golder Associates, Inc.
18300 NE Union Hill Rd. Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
G-RS1SED-4-090709	SSI0049-01	Soil	09/07/09 13:50	09/09/09 09:30
G-RS1SED-0-090709	SSI0049-02	Soil	09/07/09 13:55	09/09/09 09:30
G-RS8SED-3-090709	SSI0049-03	Soil	09/07/09 14:45	09/09/09 09:30
G-RS8SED-0-090709	SSI0049-04	Soil	09/07/09 14:50	09/09/09 09:30
G-RS7SED-0-090709	SSI0049-05	Soil	09/07/09 15:30	09/09/09 09:30
G-RS7SED-4-090709	SSI0049-06	Soil	09/07/09 15:25	09/09/09 09:30
G-RS2SED-3-090709	SSI0049-07	Soil	09/07/09 16:15	09/09/09 09:30
G-RS2SED-0-090709	SSI0049-08	Soil	09/07/09 16:20	09/09/09 09:30
G-EB-090709	SSI0049-09	Water	09/07/09 17:00	09/09/09 09:30
G-RS5SED-0-090809	SSI0049-10	Soil	09/08/09 08:30	09/09/09 09:30
G-RS5DSED-0-090809	SSI0049-11	Soil	09/08/09 08:35	09/09/09 09:30
G-RS5SED-4-090809	SSI0049-12	Soil	09/08/09 08:45	09/09/09 09:30
G-RS6SED-0-090809	SSI0049-13	Soil	09/08/09 07:40	09/09/09 09:30
G-RS6SED-3-090809	SSI0049-14	Soil	09/08/09 07:35	09/09/09 09:30
G-RS3SED-4-090809	SSI0049-15	Soil	09/08/09 11:15	09/09/09 09:30
G-RS3SED-0-090809	SSI0049-16	Soil	09/08/09 11:10	09/09/09 09:30
G-RS4SED-0-090809	SSI0049-17	Soil	09/08/09 12:20	09/09/09 09:30
G-RS4SED-4-090809	SSI0049-18	Soil	09/08/09 12:25	09/09/09 09:30
TRIP BLANK	SSI0049-19	Soil	09/08/09 00:00	09/09/09 09:30

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-07

G-RS2-SED3

Lab Sample ID: 580-15385-7

Date Sampled: 09/07/2009 1615

Client Matrix: Solid

% Moisture: 22.1

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12254.D
Dilution:	1.0			Initial Weight/Volume:	20.2776 g
Date Analyzed:	09/22/2009 1401			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		0.0021	J	0.00094	0.013
Bis(2-chloroethyl)ether		ND		0.0013	0.013
2-Chlorophenol		ND		0.00094	0.013
1,3-Dichlorobenzene		ND <i>UT</i>		0.00091	0.0063
1,4-Dichlorobenzene		ND		0.00041	0.0063
Benzyl alcohol		ND		0.0012	0.013
1,2-Dichlorobenzene		ND		0.00081	0.0063
2-Methylphenol		ND		0.00090	0.013
3 & 4 Methylphenol		ND		0.00071	0.025
N-Nitrosodi-n-propylamine		ND		0.0012	0.013
Hexachloroethane		ND		0.0014	0.013
Nitrobenzene		ND		0.0037	0.013
Isophorone		ND		0.00052	0.013
2-Nitrophenol		ND <i>UT</i>		0.00054	0.013
2,4-Dimethylphenol		ND		0.00027	0.013
Benzoic acid		0.12	J	0.082	0.32
Bis(2-chloroethoxy)methane		ND		0.00038	0.013
2,4-Dichlorophenol		ND		0.00038	0.013
1,2,4-Trichlorobenzene		ND		0.0015	0.0063
Naphthalene		0.0050		0.00028	0.0025
4-Chloroaniline		ND		0.0014	0.013
Hexachlorobutadiene		ND		0.0012	0.0063
4-Chloro-3-methylphenol		ND		0.00090	0.013
2-Methylnaphthalene		0.011		0.00029	0.0025
Hexachlorocyclopentadiene		ND <i>UT</i>		0.00033	0.013
2,4,6-Trichlorophenol		ND <i>UT</i> <i>Thg</i>		0.00051	0.019
2,4,5-Trichlorophenol		ND		0.00054	0.013
2-Chloronaphthalene		0.0037		0.00023	0.0025
2-Nitroaniline		ND		0.00053	0.013
Dimethyl phthalate		ND		0.00053	0.013
Acenaphthylene		0.0046		0.00020	0.0025
2,6-Dinitrotoluene		ND		0.00052	0.013
3-Nitroaniline		ND		0.00073	0.013
Acenaphthene		ND		0.00020	0.0025
2,4-Dinitrophenol		ND <i>UT</i>		0.0018	0.13
4-Nitrophenol		ND		0.022	0.13
Dibenzofuran		0.0030	J	0.00019	0.013
2,4-Dinitrotoluene		ND		0.00032	0.013
Diethyl phthalate		0.0041	<i>J</i>	0.0019	0.013 <i>U</i>
4-Chlorophenyl phenyl ether		ND		0.00072	0.013
Fluorene		ND		0.00015	0.0025
4-Nitroaniline		ND		0.0018	0.013
4,6-Dinitro-2-methylphenol		ND		0.0023	0.13
N-Nitrosodiphenylamine		ND		0.00028	0.0063
4-Bromophenyl phenyl ether		ND		0.00042	0.013
Hexachlorobenzene		ND		0.00048	0.0063

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-07

Lab Sample ID: 580-15385-7

Date Sampled: 09/07/2009 1615

Client Matrix: Solid

% Moisture: 22.1

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	AT12254.D
Dilution:	1.0		Initial Weight/Volume:	20.2776 g
Date Analyzed:	09/22/2009 1401		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0015	0.013
Phenanthrene		0.010		0.00027	0.0025
Anthracene		0.0057		0.00018	0.0025
Di-n-butyl phthalate		0.012	J	0.0033	0.025 u
Fluoranthene		0.0045		0.00015	0.0025
Pyrene		0.013		0.00018	0.0025
Butyl benzyl phthalate		ND		0.0039	0.013
3,3'-Dichlorobenzidine		ND		0.0010	0.025
Benzo[a]anthracene		0.0029	J	0.00022	0.0032
Chrysene		0.016		0.00018	0.0032
Bis(2-ethylhexyl) phthalate		0.0078	J	0.0053	0.19
Di-n-octyl phthalate		ND		0.00016	0.025
Benzo[a]pyrene		0.0064		0.00027	0.0038
Indeno[1,2,3-cd]pyrene		0.0064		0.00053	0.0051
Dibenz(a,h)anthracene		ND		0.00028	0.0051
Benzo[g,h,i]perylene		0.015		0.00019	0.0032
Carbazole		0.0023	J	0.00054	0.019
1-Methylnaphthalene		0.0056		0.00023	0.0038
Benzo[b]fluoranthene		0.013		0.00052	0.0025
Benzo[k]fluoranthene		0.0015	J	0.00016	0.0032
2,2'-oxybis[1-chloropropane]		ND		0.00085	0.019

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	64		36 - 145
Phenol-d5	75		38 - 149
Nitrobenzene-d5	51		38 - 141
2-Fluorobiphenyl	67		42 - 140
2,4,6-Tribromophenol	121		28 - 143
Terphenyl-d14	103		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-08

G-RS2-SED Ø

Lab Sample ID: 580-15385-8

Date Sampled: 09/07/2009 1620

Client Matrix: Solid

% Moisture: 29.1

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	AT12255.D
Dilution:	1.0		Initial Weight/Volume:	20.3219 g
Date Analyzed:	09/22/2009 1421		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		0.0055	J	0.0010	0.014
Bis(2-chloroethyl)ether		ND		0.0014	0.014
2-Chlorophenol		ND		0.0010	0.014
1,3-Dichlorobenzene		ND UJ		0.0010	0.0069
1,4-Dichlorobenzene		ND		0.00044	0.0069
Benzyl alcohol		ND		0.0013	0.014
1,2-Dichlorobenzene		ND		0.00089	0.0069
2-Methylphenol		ND		0.00099	0.014
3 & 4 Methylphenol		0.0023	J	0.00078	0.028
N-Nitrosodi-n-propylamine		ND		0.0013	0.014
Hexachloroethane		ND		0.0015	0.014
Nitrobenzene		ND		0.0040	0.014
Isophorone		ND		0.00057	0.014
2-Nitrophenol		ND UJ		0.00060	0.014
2,4-Dimethylphenol		ND		0.00029	0.014
Benzoic acid		0.099	J	0.090	0.35
Bis(2-chloroethoxy)methane		ND		0.00042	0.014
2,4-Dichlorophenol		ND		0.00042	0.014
1,2,4-Trichlorobenzene		ND		0.0017	0.0069
Naphthalene		0.0068		0.00031	0.0028
4-Chloroaniline		ND		0.0015	0.014
Hexachlorobutadiene		ND		0.0013	0.0069
4-Chloro-3-methylphenol		ND		0.00099	0.014
2-Methylnaphthalene		0.019		0.00032	0.0028
Hexachlorocyclopentadiene		ND UJ		0.00036	0.014
2,4,6-Trichlorophenol		ND		0.00056	0.021
2,4,5-Trichlorophenol		ND		0.00060	0.014
2-Chloronaphthalene		0.0013	J	0.00025	0.0028
2-Nitroaniline		ND		0.00058	0.014
Dimethyl phthalate		ND		0.00058	0.014
Acenaphthylene		0.0025	J	0.00022	0.0028
2,6-Dinitrotoluene		ND		0.00057	0.014
3-Nitroaniline		ND		0.00080	0.014
Acenaphthene		0.0016	J	0.00022	0.0028
2,4-Dinitrophenol		ND UJ		0.0019	0.14
4-Nitrophenol		ND		0.024	0.14
Dibenzofuran		0.0032	J	0.00021	0.014
2,4-Dinitrotoluene		ND		0.00035	0.014
Diethyl phthalate		ND		0.0021	0.014
4-Chlorophenyl phenyl ether		ND		0.00079	0.014
Fluorene		ND		0.00017	0.0028
4-Nitroaniline		ND		0.0019	0.014
4,6-Dinitro-2-methylphenol		ND		0.0025	0.14
N-Nitrosodiphenylamine		ND		0.00031	0.0069
4-Bromophenyl phenyl ether		ND		0.00046	0.014
Hexachlorobenzene		ND		0.00053	0.0069

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-08

Lab Sample ID: 580-15385-8

Date Sampled: 09/07/2009 1620

Client Matrix: Solid

% Moisture: 29.1

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12255.D
Dilution:	1.0			Initial Weight/Volume:	20.3219 g
Date Analyzed:	09/22/2009 1421			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0017	0.014
Phenanthrene		0.010		0.00029	0.0028
Anthracene		0.0034		0.00019	0.0028
Di-n-butyl phthalate		0.0089		0.0036	0.028 u
Fluoranthene		0.0065		0.00017	0.0028
Pyrene		0.010		0.00019	0.0028
Butyl benzyl phthalate		ND		0.0043	0.014
3,3'-Dichlorobenzidine		ND		0.0011	0.028
Benzo[a]anthracene		0.0034	J	0.00024	0.0035
Chrysene		0.0083		0.00019	0.0035
Bis(2-ethylhexyl) phthalate		ND		0.0058	0.21
Di-n-octyl phthalate		0.0018	J	0.00018	0.028
Benzo[a]pyrene		0.0052		0.00029	0.0042
Indeno[1,2,3-cd]pyrene		0.0043	J	0.00058	0.0056
Dibenz(a,h)anthracene		0.0017	J	0.00031	0.0056
Benzo[g,h,i]perylene		0.0074		0.00021	0.0035
Carbazole		0.0013	J	0.00060	0.021
1-Methylnaphthalene		0.0098		0.00025	0.0042
Benzo[b]fluoranthene		0.0069		0.00057	0.0028
Benzo[k]fluoranthene		0.0016	J	0.00018	0.0035
2,2'-oxybis[1-chloropropane]		ND		0.00093	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	83		36 - 145
Phenol-d5	83		38 - 149
Nitrobenzene-d5	80		38 - 141
2-Fluorobiphenyl	31	X	42 - 140
2,4,6-Tribromophenol	82		28 - 143
Terphenyl-d14	55		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-09

G-~~RS~~ EB

Lab Sample ID: 580-15385-9

Date Sampled: 09/07/2009 1700

Client Matrix: Water

Date Received: 09/11/2009 0940

8270C Semivolatile Organic Compounds (GC/MS SIM)

Method:	8270C	Analysis Batch:	580-50470	Instrument ID:	SEA016
Preparation:	3510C	Prep Batch:	580-50156	Lab File ID:	SE001015.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	09/18/2009 0928			Final Weight/Volume:	1 mL
Date Prepared:	09/14/2009 0908			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Naphthalene	0.014		0.0034	0.0094
2-Methylnaphthalene	0.0079	J	0.0028	0.012
1-Methylnaphthalene	0.0048	J B	0.0011	0.0094
Acenaphthylene	0.0013	J	0.0010	0.0094
Acenaphthene	0.018	B	0.00094	0.0094
Fluorene	0.0026	J B	0.0011	0.0094
Phenanthrene	0.0034	J	0.0010	0.0094
Anthracene	0.0012	J B	0.00075	0.0094
Fluoranthene	0.0026	J B	0.0015	0.0094
Pyrene	ND		0.0016	0.0094
Benzo[a]anthracene	ND		0.0023	0.0094
Chrysene	ND		0.0020	0.0094
Benzo[b]fluoranthene	ND		0.0025	0.0094
Benzo[k]fluoranthene	ND		0.0023	0.0094
Benzo[a]pyrene	ND		0.0018	0.019
Indeno[1,2,3-cd]pyrene	ND		0.0019	0.0094
Dibenz(a,h)anthracene	ND		0.0017	0.0094
Benzo[g,h,i]perylene	ND		0.0019	0.0094

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	80		40 - 110
2-Fluorobiphenyl	71		50 - 110
Terphenyl-d14	89		50 - 135

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SS10049-10

G-RS 5-SED-Ø

Lab Sample ID: 580-15385-10

Date Sampled: 09/08/2009 0830

Client Matrix: Solid

% Moisture: 29.7

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	AT12256.D
Dilution:	1.0		Initial Weight/Volume:	20.4987 g
Date Analyzed:	09/22/2009 1442		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		0.0023	J	0.0010	0.014
Bis(2-chloroethyl)ether		ND		0.0014	0.014
2-Chlorophenol		ND		0.0010	0.014
1,3-Dichlorobenzene		ND <i>UJ</i>		0.0010	0.0069
1,4-Dichlorobenzene		ND		0.00044	0.0069
Benzyl alcohol		ND		0.0013	0.014
1,2-Dichlorobenzene		ND		0.00089	0.0069
2-Methylphenol		ND		0.00099	0.014
3 & 4 Methylphenol		0.0022	J	0.00078	0.028
N-Nitrosodi-n-propylamine		ND		0.0013	0.014
Hexachloroethane		ND		0.0015	0.014
Nitrobenzene		ND		0.0040	0.014
Isophorone		ND		0.00057	0.014
2-Nitrophenol		ND <i>UJ</i>		0.00060	0.014
2,4-Dimethylphenol		ND		0.00029	0.014
Benzoic acid		0.11	J	0.090	0.35
Bis(2-chloroethoxy)methane		ND		0.00042	0.014
2,4-Dichlorophenol		ND		0.00042	0.014
1,2,4-Trichlorobenzene		ND		0.0017	0.0069
Naphthalene		0.0081		0.00031	0.0028
4-Chloroaniline		ND		0.0015	0.014
Hexachlorobutadiene		ND		0.0013	0.0069
4-Chloro-3-methylphenol		ND		0.00099	0.014
2-Methylnaphthalene		0.013		0.00032	0.0028
Hexachlorocyclopentadiene		ND <i>UJ</i>		0.00036	0.014
2,4,6-Trichlorophenol		ND		0.00056	0.021
2,4,5-Trichlorophenol		ND		0.00060	0.014
2-Chloronaphthalene		ND		0.00025	0.0028
2-Nitroaniline		ND		0.00058	0.014
Dimethyl phthalate		ND		0.00058	0.014
Acenaphthylene		0.0025	J	0.00022	0.0028
2,6-Dinitrotoluene		ND		0.00057	0.014
3-Nitroaniline		ND		0.00081	0.014
Acenaphthene		0.0031		0.00022	0.0028
2,4-Dinitrophenol		ND <i>UJ</i>		0.0019	0.14
4-Nitrophenol		ND		0.024	0.14
Dibenzofuran		0.0064	J	0.00021	0.014
2,4-Dinitrotoluene		ND		0.00035	0.014
Diethyl phthalate		0.0039	<i>J</i>	0.0021	0.014 <i>U</i>
4-Chlorophenyl phenyl ether		ND		0.00079	0.014
Fluorene		0.0047		0.00017	0.0028
4-Nitroaniline		ND		0.0019	0.014
4,6-Dinitro-2-methylphenol		ND		0.0025	0.14
N-Nitrosodiphenylamine		ND		0.00031	0.0069
4-Bromophenyl phenyl ether		ND		0.00046	0.014
Hexachlorobenzene		ND		0.00053	0.0069

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-10

Lab Sample ID: 580-15385-10

Client Matrix: Solid

% Moisture: 29.7

Date Sampled: 09/08/2009 0830

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	AT12256.D
Dilution:	1.0		Initial Weight/Volume:	20.4987 g
Date Analyzed:	09/22/2009 1442		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0017	0.014
Phenanthrene		0.015		0.00029	0.0028
Anthracene		0.0036		0.00019	0.0028
Di-n-butyl phthalate		0.011	J	0.0036	0.028 u
Fluoranthene		0.013		0.00017	0.0028
Pyrene		0.017		0.00019	0.0028
Butyl benzyl phthalate		ND		0.0043	0.014
3,3'-Dichlorobenzidine		ND		0.0011	0.028
Benzo[a]anthracene		0.0089		0.00024	0.0035
Chrysene		0.021		0.00019	0.0035
Bis(2-ethylhexyl) phthalate		0.0076	J	0.0058	0.21
Di-n-octyl phthalate		0.0039	J	0.00018	0.028
Benzo[a]pyrene		0.0074		0.00029	0.0042
Indeno[1,2,3-cd]pyrene		0.0053	J	0.00058	0.0056
Dibenz[a,h]anthracene		0.0026	J	0.00031	0.0056
Benzo[g,h,i]perylene		0.0090		0.00021	0.0035
Carbazole		0.0024	J	0.00060	0.021
1-Methylnaphthalene		0.0063		0.00025	0.0042
Benzo[b]fluoranthene		0.018		0.00057	0.0028
Benzo[k]fluoranthene		0.0037		0.00018	0.0035
2,2'-oxybis[1-chloropropane]		ND		0.00093	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	57		36 - 145
Phenol-d5	78		38 - 149
Nitrobenzene-d5	56		38 - 141
2-Fluorobiphenyl	70		42 - 140
2,4,6-Tribromophenol	123		28 - 143
Terphenyl-d14	100		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-11

G-RS5D-SEDØ

Lab Sample ID: 580-15385-11

Date Sampled: 09/08/2009 0835

Client Matrix: Solid

% Moisture: 29.4

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12257.D
Dilution:	1.0			Initial Weight/Volume:	20.4354 g
Date Analyzed:	09/22/2009 1503			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0010	0.014
Bis(2-chloroethyl)ether		ND		0.0014	0.014
2-Chlorophenol		ND		0.0010	0.014
1,3-Dichlorobenzene		ND <i>uJ</i>		0.0010	0.0069
1,4-Dichlorobenzene		ND		0.00044	0.0069
Benzyl alcohol		ND		0.0013	0.014
1,2-Dichlorobenzene		ND		0.00089	0.0069
2-Methylphenol		ND		0.00098	0.014
3 & 4 Methylphenol		ND		0.00078	0.028
N-Nitrosodi-n-propylamine		ND		0.0013	0.014
Hexachloroethane		ND		0.0015	0.014
Nitrobenzene		ND		0.0040	0.014
Isophorone		ND		0.00057	0.014
2-Nitrophenol		ND <i>uJ</i>		0.00060	0.014
2,4-Dimethylphenol		ND		0.00029	0.014
Benzoic acid		ND		0.090	0.35
Bis(2-chloroethoxy)methane		ND		0.00042	0.014
2,4-Dichlorophenol		ND		0.00042	0.014
1,2,4-Trichlorobenzene		ND		0.0017	0.0069
Naphthalene		0.0045		0.00030	0.0028
4-Chloroaniline		ND		0.0015	0.014
Hexachlorobutadiene		ND		0.0013	0.0069
4-Chloro-3-methylphenol		ND		0.00098	0.014
2-Methylnaphthalene		0.0052		0.00032	0.0028
Hexachlorocyclopentadiene		ND <i>uJ</i>		0.00036	0.014
2,4,6-Trichlorophenol		ND		0.00055	0.021
2,4,5-Trichlorophenol		ND		0.00060	0.014
2-Chloronaphthalene		ND		0.00025	0.0028
2-Nitroaniline		ND		0.00058	0.014
Dimethyl phthalate		ND		0.00058	0.014
Acenaphthylene		0.0017	J	0.00022	0.0028
2,6-Dinitrotoluene		ND		0.00057	0.014
3-Nitroaniline		ND		0.00080	0.014
Acenaphthene		0.0044		0.00022	0.0028
2,4-Dinitrophenol		ND <i>uJ</i>		0.0019	0.14
4-Nitrophenol		ND		0.024	0.14
Dibenzofuran		0.0030	J	0.00021	0.014
2,4-Dinitrotoluene		ND		0.00035	0.014
Diethyl phthalate		0.0043	J	0.0021	0.014 <i>u</i>
4-Chlorophenyl phenyl ether		ND		0.00079	0.014
Fluorene		0.0052		0.00017	0.0028
4-Nitroaniline		ND		0.0019	0.014
4,6-Dinitro-2-methylphenol		ND		0.0025	0.14
N-Nitrosodiphenylamine		ND		0.00030	0.0069
4-Bromophenyl phenyl ether		ND		0.00046	0.014
Hexachlorobenzene		ND		0.00053	0.0069

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-11

Lab Sample ID: 580-15385-11

Date Sampled: 09/08/2009 0835

Client Matrix: Solid

% Moisture: 29.4

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12257.D
Dilution:	1.0			Initial Weight/Volume:	20.4354 g
Date Analyzed:	09/22/2009 1503			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0017	0.014
Phenanthrene		0.0084		0.00029	0.0028
Anthracene		0.0027	J	0.00019	0.0028
Di-n-butyl phthalate		0.011	J	0.0036	0.028 <i>u</i>
Fluoranthene		0.010		0.00017	0.0028
Pyrene		0.011		0.00019	0.0028
Butyl benzyl phthalate		ND		0.0043	0.014
3,3'-Dichlorobenzidine		ND		0.0011	0.028
Benzo[a]anthracene		0.0042		0.00024	0.0035
Chrysene		0.011		0.00019	0.0035
Bis(2-ethylhexyl) phthalate		ND		0.0058	0.21
Di-n-octyl phthalate		ND		0.00018	0.028
Benzo[a]pyrene		0.0056		0.00029	0.0042
Indeno[1,2,3-cd]pyrene		0.0045	J	0.00058	0.0055
Dibenz(a,h)anthracene		0.0023	J	0.00030	0.0055
Benzo[g,h,i]perylene		0.0083		0.00021	0.0035
Carbazole		ND		0.00060	0.021
1-Methylnaphthalene		0.0038	J	0.00025	0.0042
Benzo[b]fluoranthene		0.0076		0.00057	0.0028
Benzo[k]fluoranthene		0.0021	J	0.00018	0.0035
2,2'-oxybis[1-chloropropane]		ND		0.00093	0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	76		36 - 145
Phenol-d5	80		38 - 149
Nitrobenzene-d5	51		38 - 141
2-Fluorobiphenyl	57		42 - 140
2,4,6-Tribromophenol	121		28 - 143
Terphenyl-d14	91		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-12

G-RS5-SED4

Lab Sample ID: 580-15385-12

Date Sampled: 09/08/2009 0845

Client Matrix: Solid

% Moisture: 18.0

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12258.D
Dilution:	1.0			Initial Weight/Volume:	20.4296 g
Date Analyzed:	09/22/2009 1524			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.00088	0.012
Bis(2-chloroethyl)ether		ND		0.0012	0.012
2-Chlorophenol		ND		0.00088	0.012
1,3-Dichlorobenzene		ND UJ		0.00086	0.0060
1,4-Dichlorobenzene		ND		0.00038	0.0060
Benzyl alcohol		ND		0.0011	0.012
1,2-Dichlorobenzene		ND		0.00076	0.0060
2-Methylphenol		ND		0.00085	0.012
3 & 4 Methylphenol		ND		0.00067	0.024
N-Nitrosodi-n-propylamine		ND		0.0012	0.012
Hexachloroethane		ND		0.0013	0.012
Nitrobenzene		ND		0.0035	0.012
Isophorone		ND		0.00049	0.012
2-Nitrophenol		ND UJ		0.00051	0.012
2,4-Dimethylphenol		ND		0.00025	0.012
Benzoic acid		ND		0.078	0.30
Bis(2-chloroethoxy)methane		ND		0.00036	0.012
2,4-Dichlorophenol		ND		0.00036	0.012
1,2,4-Trichlorobenzene		ND		0.0014	0.0060
Naphthalene		0.013		0.00026	0.0024
4-Chloroaniline		ND		0.0013	0.012
Hexachlorobutadiene		ND		0.0011	0.0060
4-Chloro-3-methylphenol		ND		0.00085	0.012
2-Methylnaphthalene		ND		0.00027	0.0024
Hexachlorocyclopentadiene		ND UJ		0.00031	0.012
2,4,6-Trichlorophenol		ND		0.00048	0.018
2,4,5-Trichlorophenol		ND		0.00051	0.012
2-Chloronaphthalene		ND		0.00021	0.0024
2-Nitroaniline		ND		0.00050	0.012
Dimethyl phthalate		ND		0.00050	0.012
Acenaphthylene		ND		0.00019	0.0024
2,6-Dinitrotoluene		ND		0.00049	0.012
3-Nitroaniline		ND		0.00069	0.012
Acenaphthene		0.041		0.00019	0.0024
2,4-Dinitrophenol		ND UJ		0.0017	0.12
4-Nitrophenol		ND		0.020	0.12
Dibenzofuran		ND		0.00018	0.012
2,4-Dinitrotoluene		ND		0.00030	0.012
Diethyl phthalate		ND		0.0018	0.012
4-Chlorophenyl phenyl ether		ND		0.00068	0.012
Fluorene		0.080		0.00014	0.0024
4-Nitroaniline		ND		0.0017	0.012
4,6-Dinitro-2-methylphenol		ND		0.0021	0.12
N-Nitrosodiphenylamine		ND		0.00026	0.0060
4-Bromophenyl phenyl ether		ND		0.00039	0.012
Hexachlorobenzene		ND		0.00045	0.0060

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-12

Lab Sample ID: 580-15385-12

Client Matrix: Solid

% Moisture: 18.0

Date Sampled: 09/08/2009 0845

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-50679

Instrument ID: TAC002

Preparation: 3550B

Prep Batch: 580-50242

Lab File ID: AT12258.D

Dilution: 1.0

Initial Weight/Volume: 20.4296 g

Date Analyzed: 09/22/2009 1524

Final Weight/Volume: 2 mL

Date Prepared: 09/15/2009 1010

Injection Volume: 1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0014	0.012
Phenanthrene		0.080		0.00025	0.0024
Anthracene		0.010		0.00017	0.0024
Di-n-butyl phthalate		ND		0.0031	0.024
Fluoranthene		0.0078		0.00014	0.0024
Pyrene		0.027		0.00017	0.0024
Butyl benzyl phthalate		ND		0.0037	0.012
3,3'-Dichlorobenzidine		ND		0.00094	0.024
Benzo[a]anthracene		0.0059		0.00020	0.0030
Chrysene		0.013		0.00017	0.0030
Bis(2-ethylhexyl) phthalate		ND		0.0050	0.18
Di-n-octyl phthalate		ND		0.00016	0.024
Benzo[a]pyrene		0.0069		0.00025	0.0036
Indeno[1,2,3-cd]pyrene		0.0023	J	0.00050	0.0048
Dibenz[a,h]anthracene		ND		0.00026	0.0048
Benzo[g,h,i]perylene		0.0050		0.00018	0.0030
Carbazole		ND		0.00051	0.018
1-Methylnaphthalene		0.087		0.00021	0.0036
Benzo[b]fluoranthene		0.0052		0.00049	0.0024
Benzo[k]fluoranthene		ND		0.00016	0.0030
2,2'-oxybis[1-chloropropane]		ND		0.00080	0.018

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	71		36 - 145
Phenol-d5	79		38 - 149
Nitrobenzene-d5	52		38 - 141
2-Fluorobiphenyl	53		42 - 140
2,4,6-Tribromophenol	103		28 - 143
Terphenyl-d14	77		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-13

G-RS6-8ED

Lab Sample ID: 580-15385-13

Date Sampled: 09/08/2009 0740

Client Matrix: Solid

% Moisture: 25.0

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	AT12259.D
Dilution:	1.0		Initial Weight/Volume:	20.1655 g
Date Analyzed:	09/22/2009 1545		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		0.0012	J	0.00098	0.013
Bis(2-chloroethyl)ether		ND		0.0013	0.013
2-Chlorophenol		ND		0.00098	0.013
1,3-Dichlorobenzene		ND UT		0.00095	0.0066
1,4-Dichlorobenzene		ND		0.00042	0.0066
Benzyl alcohol		ND		0.0013	0.013
1,2-Dichlorobenzene		ND		0.00085	0.0066
2-Methylphenol		ND		0.00094	0.013
3 & 4 Methylphenol		ND		0.00074	0.026
N-Nitrosodi-n-propylamine		ND		0.0013	0.013
Hexachloroethane		ND		0.0015	0.013
Nitrobenzene		ND		0.0038	0.013
Isophorone		ND		0.00054	0.013
2-Nitrophenol		ND UT		0.00057	0.013
2,4-Dimethylphenol		ND		0.00028	0.013
Benzoic acid		ND		0.086	0.33
Bis(2-chloroethoxy)methane		ND		0.00040	0.013
2,4-Dichlorophenol		ND		0.00040	0.013
1,2,4-Trichlorobenzene		ND		0.0016	0.0066
Naphthalene		0.0016	J	0.00029	0.0026
4-Chloroaniline		ND		0.0015	0.013
Hexachlorobutadiene		ND		0.0012	0.0066
4-Chloro-3-methylphenol		ND		0.00094	0.013
2-Methylnaphthalene		0.0028		0.00030	0.0026
Hexachlorocyclopentadiene		ND UT		0.00034	0.013
2,4,6-Trichlorophenol		ND		0.00053	0.020
2,4,5-Trichlorophenol		ND		0.00057	0.013
2-Chloronaphthalene		ND		0.00024	0.0026
2-Nitroaniline		ND		0.00056	0.013
Dimethyl phthalate		ND		0.00056	0.013
Acenaphthylene		0.00098	J	0.00021	0.0026
2,6-Dinitrotoluene		ND		0.00054	0.013
3-Nitroaniline		ND		0.00077	0.013
Acenaphthene		ND		0.00021	0.0026
2,4-Dinitrophenol		ND UT		0.0019	0.13
4-Nitrophenol		ND		0.022	0.13
Dibenzofuran		0.00093	J	0.00020	0.013
2,4-Dinitrotoluene		ND		0.00033	0.013
Diethyl phthalate		0.0049	J	0.0020	0.013 u
4-Chlorophenyl phenyl ether		ND		0.00075	0.013
Fluorene		ND		0.00016	0.0026
4-Nitroaniline		ND		0.0019	0.013
4,6-Dinitro-2-methylphenol		ND		0.0024	0.13
N-Nitrosodiphenylamine		ND		0.00029	0.0066
4-Bromophenyl phenyl ether		ND		0.00044	0.013
Hexachlorobenzene		ND		0.00050	0.0066

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-13

Lab Sample ID: 580-15385-13

Client Matrix: Solid

% Moisture: 25.0

Date Sampled: 09/08/2009 0740

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12259.D
Dilution:	1.0			Initial Weight/Volume:	20.1655 g
Date Analyzed:	09/22/2009 1545			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0016	0.013
Phenanthrene		0.0043		0.00028	0.0026
Anthracene		0.0020	J	0.00019	0.0026
Di-n-butyl phthalate		0.0084	J	0.0034	0.026 u
Fluoranthene		0.014		0.00016	0.0026
Pyrene		0.013		0.00019	0.0026
Butyl benzyl phthalate		ND		0.0041	0.013
3,3'-Dichlorobenzidine		ND		0.0010	0.026
Benzo[a]anthracene		0.0058		0.00022	0.0033
Chrysene		0.0085		0.00019	0.0033
Bis(2-ethylhexyl) phthalate		0.010	J	0.0056	0.20
Di-n-octyl phthalate		ND		0.00017	0.026
Benzo[a]pyrene		0.0062		0.00028	0.0040
Indeno[1,2,3-cd]pyrene		0.0040	J	0.00056	0.0053
Dibenz(a,h)anthracene		0.0017	J	0.00029	0.0053
Benzo[g,h,i]perylene		0.0049		0.00020	0.0033
Carbazole		0.0011	J	0.00057	0.020
1-Methylnaphthalene		0.0015	J	0.00024	0.0040
Benzo[b]fluoranthene		0.010		0.00054	0.0026
Benzo[k]fluoranthene		0.0022	J	0.00017	0.0033
2,2'-oxybis[1-chloropropane]		ND		0.00089	0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	61		36 - 145
Phenol-d5	74		38 - 149
Nitrobenzene-d5	47		38 - 141
2-Fluorobiphenyl	65		42 - 140
2,4,6-Tribromophenol	101		28 - 143
Terphenyl-d14	86		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-14

G-RS6-SED 3

Lab Sample ID: 580-15385-14

Date Sampled: 09/08/2009 0735

Client Matrix: Solid

% Moisture: 31.9

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12262.D
Dilution:	1.0			Initial Weight/Volume:	20.0532 g
Date Analyzed:	09/22/2009 1649			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0011	0.015
Bis(2-chloroethyl)ether		ND		0.0015	0.015
2-Chlorophenol		ND		0.0011	0.015
1,3-Dichlorobenzene		ND <i>UT</i>		0.0011	0.0073
1,4-Dichlorobenzene		ND		0.00047	0.0073
Benzyl alcohol		ND		0.0014	0.015
1,2-Dichlorobenzene		ND		0.00094	0.0073
2-Methylphenol		ND		0.0010	0.015
3 & 4 Methylphenol		0.0020	J	0.00082	0.029
N-Nitrosodi-n-propylamine		ND		0.0014	0.015
Hexachloroethane		ND		0.0016	0.015
Nitrobenzene		ND		0.0042	0.015
Isophorone		ND		0.00060	0.015
2-Nitrophenol		ND <i>UT</i>		0.00063	0.015
2,4-Dimethylphenol		ND		0.00031	0.015
Benzoic acid		ND		0.095	0.37
Bis(2-chloroethoxy)methane		ND		0.00044	0.015
2,4-Dichlorophenol		ND		0.00044	0.015
1,2,4-Trichlorobenzene		ND		0.0018	0.0073
Naphthalene		ND		0.00032	0.0029
4-Chloroaniline		ND		0.0016	0.015
Hexachlorobutadiene		ND		0.0013	0.0073
4-Chloro-3-methylphenol		ND		0.0010	0.015
2-Methylnaphthalene		0.0020	J	0.00034	0.0029
Hexachlorocyclopentadiene		ND <i>UT</i>		0.00038	0.015
2,4,6-Trichlorophenol		ND		0.00059	0.022
2,4,5-Trichlorophenol		ND		0.00063	0.015
2-Chloronaphthalene		ND		0.00026	0.0029
2-Nitroaniline		ND		0.00062	0.015
Dimethyl phthalate		ND		0.00062	0.015
Acenaphthylene		ND		0.00023	0.0029
2,6-Dinitrotoluene		0.0031	J	0.00060	0.015
3-Nitroaniline		ND		0.00085	0.015
Acenaphthene		ND		0.00023	0.0029
2,4-Dinitrophenol		ND <i>UT</i>		0.0021	0.15
4-Nitrophenol		ND		0.025	0.15
Dibenzofuran		ND		0.00022	0.015
2,4-Dinitrotoluene		ND		0.00037	0.015
Diethyl phthalate		ND		0.0022	0.015
4-Chlorophenyl phenyl ether		ND		0.00084	0.015
Fluorene		ND		0.00018	0.0029
4-Nitroaniline		ND		0.0021	0.015
4,6-Dinitro-2-methylphenol		ND		0.0026	0.15
N-Nitrosodiphenylamine		ND		0.00032	0.0073
4-Bromophenyl phenyl ether		ND		0.00048	0.015
Hexachlorobenzene		ND		0.00056	0.0073

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-14

Lab Sample ID: 580-15385-14

Client Matrix: Solid

% Moisture: 31.9

Date Sampled: 09/08/2009 0735

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50679	Instrument ID:	TAC002
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	AT12262.D
Dilution:	1.0			Initial Weight/Volume:	20.0532 g
Date Analyzed:	09/22/2009 1649			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 µL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.0018	0.015
Phenanthrene		0.0014	J	0.00031	0.0029
Anthracene		0.00081	J	0.00021	0.0029
Di-n-butyl phthalate		0.0096	J	0.0038	0.029 u
Fluoranthene		0.0016	J	0.00018	0.0029
Pyrene		ND		0.00021	0.0029
Butyl benzyl phthalate		ND		0.0045	0.015
3,3'-Dichlorobenzidine		ND		0.0012	0.029
Benzo[a]anthracene		0.00042	J	0.00025	0.0037
Chrysene		0.0033	J	0.00021	0.0037
Bis(2-ethylhexyl) phthalate		0.0068	J	0.0062	0.22
Di-n-octyl phthalate		ND		0.00019	0.029
Benzo[a]pyrene		0.00098	J	0.00031	0.0044
Indeno[1,2,3-cd]pyrene		0.0016	J	0.00062	0.0059
Dibenz[a,h]anthracene		ND		0.00032	0.0059
Benzo[g,h,i]perylene		0.0023	J	0.00022	0.0037
Carbazole		ND		0.00063	0.022
1-Methylnaphthalene		0.00097	J	0.00026	0.0044
Benzo[b]fluoranthene		0.0015	J	0.00060	0.0029
Benzo[k]fluoranthene		0.00061	J	0.00019	0.0037
2,2'-oxybis[1-chloropropane]		ND		0.00098	0.022

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	51		36 - 145
Phenol-d5	55		38 - 149
Nitrobenzene-d5	48		38 - 141
2-Fluorobiphenyl	31	X	42 - 140
2,4,6-Tribromophenol	63		28 - 143
Terphenyl-d14	67		42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SS10049-15

G-RS3-SED4

Lab Sample ID: 580-15385-15

Client Matrix: Solid

% Moisture: 16.8

Date Sampled: 09/08/2009 1115

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-50472

Instrument ID: TAC023

Preparation: 3550B

Prep Batch: 580-50242

Lab File ID: HP15250.D

Dilution: 10

Initial Weight/Volume: 20.4612 g

Date Analyzed: 09/18/2009 1450

Final Weight/Volume: 2 mL

Date Prepared: 09/15/2009 1010

Injection Volume: 1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0087	0.12
Bis(2-chloroethyl)ether		ND		0.012	0.12
2-Chlorophenol		ND		0.0087	0.12
1,3-Dichlorobenzene		ND UJ		0.0085	0.059
1,4-Dichlorobenzene		ND		0.0038	0.059
Benzyl alcohol		ND		0.011	0.12
1,2-Dichlorobenzene		ND		0.0075	0.059
2-Methylphenol		ND		0.0083	0.12
3 & 4 Methylphenol		ND		0.0066	0.23
N-Nitrosodi-n-propylamine		ND		0.011	0.12
Hexachloroethane		ND		0.013	0.12
Nitrobenzene		ND		0.034	0.12
Isophorone		0.022	J	0.0048	0.12
2-Nitrophenol		ND UJ		0.0051	0.12
2,4-Dimethylphenol		ND		0.0025	0.12
Benzoic acid		ND		0.76	2.9
Bis(2-chloroethoxy)methane		ND		0.0035	0.12
2,4-Dichlorophenol		ND		0.0035	0.12
1,2,4-Trichlorobenzene		ND		0.014	0.059
Naphthalene		ND		0.0026	0.023
4-Chloroaniline		ND		0.013	0.12
Hexachlorobutadiene		ND		0.011	0.059
4-Chloro-3-methylphenol		ND		0.0083	0.12
2-Methylnaphthalene		0.016	J	0.0027	0.023
Hexachlorocyclopentadiene		ND UJ		0.0031	0.12
2,4,6-Trichlorophenol		ND		0.0047	0.18
2,4,5-Trichlorophenol		ND		0.0051	0.12
2-Chloronaphthalene		ND		0.0021	0.023
2-Nitroaniline		ND		0.0049	0.12
Dimethyl phthalate		ND		0.0049	0.12
Acenaphthylene		ND		0.0019	0.023
2,6-Dinitrotoluene		ND		0.0048	0.12
3-Nitroaniline		ND		0.0068	0.12
Acenaphthene		0.18		0.0019	0.023
2,4-Dinitrophenol		ND UJ		0.016	1.2
4-Nitrophenol		ND		0.20	1.2
Dibenzofuran		ND		0.0018	0.12
2,4-Dinitrotoluene		ND		0.0029	0.12
Diethyl phthalate		ND		0.018	0.12
4-Chlorophenyl phenyl ether		ND		0.0067	0.12
Fluorene		0.17		0.0014	0.023
4-Nitroaniline		ND		0.016	0.12
4,6-Dinitro-2-methylphenol		ND		0.021	1.2
N-Nitrosodiphenylamine		ND		0.0026	0.059
4-Bromophenyl phenyl ether		ND		0.0039	0.12
Hexachlorobenzene		ND		0.0045	0.059

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-15

Lab Sample ID: 580-15385-15

Date Sampled: 09/08/2009 1115

Client Matrix: Solid

% Moisture: 16.8

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15250.D
Dilution:	10		Initial Weight/Volume:	20.4612 g
Date Analyzed:	09/18/2009 1450		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.014	0.12
Phenanthrene		0.48		0.0025	0.023
Anthracene		0.10		0.0016	0.023
Di-n-butyl phthalate		ND		0.031	0.23
Fluoranthene		0.15	*	0.0014	0.023
Pyrene		0.54		0.0016	0.023
Butyl benzyl phthalate		ND		0.036	0.12
3,3'-Dichlorobenzidine		ND		0.0093	0.23
Benzo[a]anthracene		0.10		0.0020	0.029
Chrysene		0.29		0.0016	0.029
Bis(2-ethylhexyl) phthalate		ND		0.049	1.8
Di-n-octyl phthalate		ND		0.0015	0.23
Benzo[a]pyrene		0.097		0.0025	0.035
Indeno[1,2,3-cd]pyrene		0.025	J	0.0049	0.047
Dibenz(a,h)anthracene		ND		0.0026	0.047
Benzo[g,h,i]perylene		0.038		0.0018	0.029
Carbazole		ND		0.0051	0.18
1-Methylnaphthalene		0.11		0.0021	0.035
Benzo[b]fluoranthene		0.078		0.0048	0.023
Benzo[k]fluoranthene		0.027	J	0.0015	0.029
2,2'-oxybis[1-chloropropane]		ND		0.0079	0.18

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	0	X D	36 - 145
Phenol-d5	0	X D	38 - 149
Nitrobenzene-d5	0	X D	38 - 141
2-Fluorobiphenyl	0	X D	42 - 140
2,4,6-Tribromophenol	0	X D	28 - 143
Terphenyl-d14	0	X D	42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-16

G-RS3-SEDØ

Lab Sample ID: 580-15385-16

Client Matrix: Solid

% Moisture: 27.9

Date Sampled: 09/08/2009 1110

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15251.D
Dilution:	10		Initial Weight/Volume:	20.2664 g
Date Analyzed:	09/18/2009 1511		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 µL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.010	0.14
Bis(2-chloroethyl)ether		ND		0.014	0.14
2-Chlorophenol		ND		0.010	0.14
1,3-Dichlorobenzene		ND UJ		0.0099	0.068
1,4-Dichlorobenzene		ND		0.0044	0.068
Benzyl alcohol		ND		0.013	0.14
1,2-Dichlorobenzene		ND		0.0088	0.068
2-Methylphenol		ND		0.0097	0.14
3 & 4 Methylphenol		ND		0.0077	0.27
N-Nitrosodi-n-propylamine		ND		0.013	0.14
Hexachloroethane		ND		0.015	0.14
Nitrobenzene		ND		0.040	0.14
Isophorone		ND		0.0056	0.14
2-Nitrophenol		ND UJ		0.0059	0.14
2,4-Dimethylphenol		ND		0.0029	0.14
Benzoic acid		ND		0.89	3.4
Bis(2-chloroethoxy)methane		ND		0.0041	0.14
2,4-Dichlorophenol		ND		0.0041	0.14
1,2,4-Trichlorobenzene		ND		0.016	0.068
Naphthalene		ND		0.0030	0.027
4-Chloroaniline		ND		0.015	0.14
Hexachlorobutadiene		ND		0.012	0.068
4-Chloro-3-methylphenol		ND		0.0097	0.14
2-Methylnaphthalene		0.0055	J	0.0031	0.027
Hexachlorocyclopentadiene		ND UJ		0.0036	0.14
2,4,6-Trichlorophenol		ND		0.0055	0.21
2,4,5-Trichlorophenol		ND		0.0059	0.14
2-Chloronaphthalene		ND		0.0025	0.027
2-Nitroaniline		ND		0.0057	0.14
Dimethyl phthalate		ND		0.0057	0.14
Acenaphthylene		ND		0.0022	0.027
2,6-Dinitrotoluene		ND		0.0056	0.14
3-Nitroaniline		ND		0.0079	0.14
Acenaphthene		0.032		0.0022	0.027
2,4-Dinitrophenol		ND UJ		0.019	1.4
4-Nitrophenol		ND		0.23	1.4
Dibenzofuran		ND		0.0021	0.14
2,4-Dinitrotoluene		ND		0.0034	0.14
Diethyl phthalate		ND		0.021	0.14
4-Chlorophenyl phenyl ether		ND		0.0078	0.14
Fluorene		0.059		0.0016	0.027
4-Nitroaniline		ND		0.019	0.14
4,6-Dinitro-2-methylphenol		ND		0.025	1.4
N-Nitrosodiphenylamine		ND		0.0030	0.068
4-Bromophenyl phenyl ether		ND		0.0045	0.14
Hexachlorobenzene		ND		0.0052	0.068

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-16

Lab Sample ID: 580-15385-16

Client Matrix: Solid

% Moisture: 27.9

Date Sampled: 09/08/2009 1110

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15251.D
Dilution:	10		Initial Weight/Volume:	20.2664 g
Date Analyzed:	09/18/2009 1511		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.016	0.14
Phenanthrene		0.078		0.0029	0.027
Anthracene		0.017	J	0.0019	0.027
Di-n-butyl phthalate		ND		0.036	0.27
Fluoranthene		ND	*	0.0016	0.027
Pyrene		0.092		0.0019	0.027
Butyl benzyl phthalate		ND		0.042	0.14
3,3'-Dichlorobenzidine		ND		0.011	0.27
Benzo[a]anthracene		ND		0.0023	0.034
Chrysene		ND		0.0019	0.034
Bis(2-ethylhexyl) phthalate		ND		0.057	2.1
Di-n-octyl phthalate		ND		0.0018	0.27
Benzo[a]pyrene		ND		0.0029	0.041
Indeno[1,2,3-cd]pyrene		ND		0.0057	0.055
Dibenz(a,h)anthracene		ND		0.0030	0.055
Benzo[g,h,i]perylene		0.028	J	0.0021	0.034
Carbazole		ND		0.0059	0.21
1-Methylnaphthalene		0.050		0.0025	0.041
Benzo[b]fluoranthene		ND		0.0056	0.027
Benzo[k]fluoranthene		ND		0.0018	0.034
2,2'-oxybis[1-chloropropane]		ND		0.0092	0.21

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	0	X D	36 - 145
Phenol-d5	0	X D	38 - 149
Nitrobenzene-d5	0	X D	38 - 141
2-Fluorobiphenyl	0	X D	42 - 140
2,4,6-Tribromophenol	0	X D	28 - 143
Terphenyl-d14	0	X D	42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-17

G-RS4-SEDØ

Lab Sample ID: 580-15385-17

Date Sampled: 09/08/2009 1220

Client Matrix: Solid

% Moisture: 16.5

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15252.D
Dilution:	10			Initial Weight/Volume:	20.2801 g
Date Analyzed:	09/18/2009 1531			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 µL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0087	0.12
Bis(2-chloroethyl)ether		ND		0.012	0.12
2-Chlorophenol		ND		0.0087	0.12
1,3-Dichlorobenzene		ND UJ		0.0085	0.059
1,4-Dichlorobenzene		ND		0.0038	0.059
Benzyl alcohol		ND		0.011	0.12
1,2-Dichlorobenzene		ND		0.0076	0.059
2-Methylphenol		ND		0.0084	0.12
3 & 4 Methylphenol		ND		0.0066	0.24
N-Nitrosodi-n-propylamine		ND		0.011	0.12
Hexachloroethane		ND		0.013	0.12
Nitrobenzene		ND		0.034	0.12
Isophorone		ND		0.0048	0.12
2-Nitrophenol		ND UJ		0.0051	0.12
2,4-Dimethylphenol		ND		0.0025	0.12
Benzoic acid		ND		0.77	3.0
Bis(2-chloroethoxy)methane		ND		0.0035	0.12
2,4-Dichlorophenol		ND		0.0035	0.12
1,2,4-Trichlorobenzene		ND		0.014	0.059
Naphthalene		ND		0.0026	0.024
4-Chloroaniline		ND		0.013	0.12
Hexachlorobutadiene		ND		0.011	0.059
4-Chloro-3-methylphenol		ND		0.0084	0.12
2-Methylnaphthalene		0.47		0.0027	0.024
Hexachlorocyclopentadiene		ND UJ		0.0031	0.12
2,4,6-Trichlorophenol		ND		0.0047	0.18
2,4,5-Trichlorophenol		ND		0.0051	0.12
2-Chloronaphthalene		ND		0.0021	0.024
2-Nitroaniline		ND		0.0050	0.12
Dimethyl phthalate		ND		0.0050	0.12
Acenaphthylene		ND		0.0019	0.024
2,6-Dinitrotoluene		ND		0.0048	0.12
3-Nitroaniline		ND		0.0069	0.12
Acenaphthene		1.9		0.0019	0.024
2,4-Dinitrophenol		ND UJ		0.017	1.2
4-Nitrophenol		ND		0.20	1.2
Dibenzofuran		ND		0.0018	0.12
2,4-Dinitrotoluene		ND		0.0030	0.12
Diethyl phthalate		ND		0.018	0.12
4-Chlorophenyl phenyl ether		ND		0.0067	0.12
Fluorene		3.1		0.0014	0.024
4-Nitroaniline		ND		0.017	0.12
4,6-Dinitro-2-methylphenol		ND		0.021	1.2
N-Nitrosodiphenylamine		ND		0.0026	0.059
4-Bromophenyl phenyl ether		ND		0.0039	0.12
Hexachlorobenzene		ND		0.0045	0.059

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-17

Lab Sample ID: 580-15385-17

Date Sampled: 09/08/2009 1220

Client Matrix: Solid

% Moisture: 16.5

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15252.D
Dilution:	10			Initial Weight/Volume:	20.2801 g
Date Analyzed:	09/18/2009 1531			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.014	0.12
Phenanthrene		5.0		0.0025	0.024
Anthracene		0.23		0.0017	0.024
Di-n-butyl phthalate		ND		0.031	0.24
Fluoranthene		0.68	*	0.0014	0.024
Pyrene		2.3		0.0017	0.024
Butyl benzyl phthalate		ND		0.037	0.12
3,3'-Dichlorobenzidine		ND		0.0093	0.24
Benzo[a]anthracene		0.48		0.0020	0.030
Chrysene		1.0		0.0017	0.030
Bis(2-ethylhexyl) phthalate		ND		0.050	1.8
Di-n-octyl phthalate		ND		0.0015	0.24
Benzo[a]pyrene		ND		0.0025	0.035
Indeno[1,2,3-cd]pyrene		ND		0.0050	0.047
Dibenz(a,h)anthracene		ND		0.0026	0.047
Benzo[g,h,i]perylene		0.12		0.0018	0.030
Carbazole		ND		0.0051	0.18
1-Methylnaphthalene		5.0		0.0021	0.035
Benzo[b]fluoranthene		ND		0.0048	0.024
Benzo[k]fluoranthene		ND		0.0015	0.030
2,2'-oxybis[1-chloropropane]		ND		0.0079	0.18

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	0	X D	36 - 145
Phenol-d5	0	X D	38 - 149
Nitrobenzene-d5	0	X D	38 - 141
2-Fluorobiphenyl	0	X D	42 - 140
2,4,6-Tribromophenol	0	X D	28 - 143
Terphenyl-d14	0	X D	42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-18

G-RS4-SED4

Lab Sample ID: 580-15385-18

Date Sampled: 09/08/2009 1225

Client Matrix: Solid

% Moisture: 13.4

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch:	580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch:	580-50242	Lab File ID:	HP15253.D
Dilution:	10			Initial Weight/Volume:	20.2828 g
Date Analyzed:	09/18/2009 1552			Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010			Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Phenol		ND		0.0084	0.11
Bis(2-chloroethyl)ether		ND		0.011	0.11
2-Chlorophenol		ND		0.0084	0.11
1,3-Dichlorobenzene		ND UJ		0.0082	0.057
1,4-Dichlorobenzene		ND		0.0036	0.057
Benzyl alcohol		ND		0.011	0.11
1,2-Dichlorobenzene		ND		0.0073	0.057
2-Methylphenol		ND		0.0081	0.11
3 & 4 Methylphenol		ND		0.0064	0.23
N-Nitrosodi-n-propylamine		ND		0.011	0.11
Hexachloroethane		ND		0.013	0.11
Nitrobenzene		ND		0.033	0.11
Isophorone		ND		0.0047	0.11
2-Nitrophenol		ND UJ		0.0049	0.11
2,4-Dimethylphenol		ND		0.0024	0.11
Benzoic acid		ND		0.74	2.8
Bis(2-chloroethoxy)methane		ND		0.0034	0.11
2,4-Dichlorophenol		ND		0.0034	0.11
1,2,4-Trichlorobenzene		ND		0.014	0.057
Naphthalene		ND		0.0025	0.023
4-Chloroaniline		ND		0.013	0.11
Hexachlorobutadiene		ND		0.010	0.057
4-Chloro-3-methylphenol		ND		0.0081	0.11
2-Methylnaphthalene		0.0048	J	0.0026	0.023
Hexachlorocyclopentadiene		ND UJ		0.0030	0.11
2,4,6-Trichlorophenol		ND		0.0046	0.17
2,4,5-Trichlorophenol		ND		0.0049	0.11
2-Chloronaphthalene		ND		0.0020	0.023
2-Nitroaniline		ND		0.0048	0.11
Dimethyl phthalate		ND		0.0048	0.11
Acenaphthylene		ND		0.0018	0.023
2,6-Dinitrotoluene		ND		0.0047	0.11
3-Nitroaniline		ND		0.0066	0.11
Acenaphthene		ND		0.0018	0.023
2,4-Dinitrophenol		ND UJ		0.016	1.1
4-Nitrophenol		ND		0.19	1.1
Dibenzofuran		ND		0.0017	0.11
2,4-Dinitrotoluene		ND		0.0028	0.11
Diethyl phthalate		ND		0.017	0.11
4-Chlorophenyl phenyl ether		ND		0.0065	0.11
Fluorene		ND		0.0014	0.023
4-Nitroaniline		ND		0.016	0.11
4,6-Dinitro-2-methylphenol		ND		0.020	1.1
N-Nitrosodiphenylamine		ND		0.0025	0.057
4-Bromophenyl phenyl ether		ND		0.0038	0.11
Hexachlorobenzene		ND		0.0043	0.057

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-18

Lab Sample ID: 580-15385-18

Client Matrix: Solid

% Moisture: 13.4

Date Sampled: 09/08/2009 1225

Date Received: 09/11/2009 0940

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-50472	Instrument ID:	TAC023
Preparation:	3550B	Prep Batch: 580-50242	Lab File ID:	HP15253.D
Dilution:	10		Initial Weight/Volume:	20.2828 g
Date Analyzed:	09/18/2009 1552		Final Weight/Volume:	2 mL
Date Prepared:	09/15/2009 1010		Injection Volume:	1.0 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Pentachlorophenol		ND		0.014	0.11
Phenanthrene		ND		0.0024	0.023
Anthracene		ND		0.0016	0.023
Di-n-butyl phthalate		ND		0.030	0.23
Fluoranthene		0.0065	J*	0.0014	0.023
Pyrene		0.023		0.0016	0.023
Butyl benzyl phthalate		ND		0.035	0.11
3,3'-Dichlorobenzidine		ND		0.0090	0.23
Benzo[a]anthracene		ND		0.0019	0.028
Chrysene		0.0035	J	0.0016	0.028
Bis(2-ethylhexyl) phthalate		ND		0.048	1.7
Di-n-octyl phthalate		ND		0.0015	0.23
Benzo[a]pyrene		ND		0.0024	0.034
Indeno[1,2,3-cd]pyrene		ND		0.0048	0.046
Dibenz(a,h)anthracene		ND		0.0025	0.046
Benzo[g,h,i]perylene		ND		0.0017	0.028
Carbazole		ND		0.0049	0.17
1-Methylnaphthalene		0.0033	J	0.0020	0.034
Benzo[b]fluoranthene		ND		0.0047	0.023
Benzo[k]fluoranthene		ND		0.0015	0.028
2,2'-oxybis[1-chloropropane]		ND		0.0076	0.17

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	0	X D	36 - 145
Phenol-d5	0	X D	38 - 149
Nitrobenzene-d5	0	X D	38 - 141
2-Fluorobiphenyl	0	X D	42 - 140
2,4,6-Tribromophenol	0	X D	28 - 143
Terphenyl-d14	0	X D	42 - 151

Analytical Data

Client: TestAmerica Laboratories, Inc

Job Number: 580-15385-1

Client Sample ID: SSI0049-09

Lab Sample ID: 580-15385-9

Client Matrix: Water

Date Sampled: 09/07/2009 1700

Date Received: 09/11/2009 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 580-52626	Instrument ID:	TAC034
Preparation:	3510C	Prep Batch: 580-52855	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	1 mL
Date Analyzed:	10/23/2009 1413		Injection Volume:	
Date Prepared:	09/14/2009 0857		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
PCB-1016	ND		0.0042	0.047
PCB-1221	ND		0.0058	0.047
PCB-1232	ND		0.0039	0.047
PCB-1242	ND		0.0039	0.047
PCB-1248	ND		0.0067	0.047
PCB-1254	ND		0.0042	0.047
PCB-1260	ND		0.0037	0.047

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	86		60 - 150
DCB Decachlorobiphenyl	58		40 - 135

Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: **073-93312-03**
Project Manager: **Doug Morell**


Report Created:
10/28/09 14:26

Mercury (CVAA) TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-01 (G-RS1SED-4-090709)		Soil								Sampled: 09/07/09 13:50
Mercury	7471A Dry	0.061	0.0074	0.024	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:28	
SSI0049-02 (G-RS1SED-0-090709)		Soil								Sampled: 09/07/09 13:55
Mercury	7471A Dry	ND	0.0087	0.028	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:32	
SSI0049-03 (G-RS8SED-3-090709)		Soil								Sampled: 09/07/09 14:45
Mercury	7471A Dry	ND	0.0070	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:36	
SSI0049-04 (G-RS8SED-0-090709)		Soil								Sampled: 09/07/09 14:50
Mercury	7471A Dry	0.026	0.0084	0.027	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:40	J
SSI0049-05 (G-RS7SED-0-090709)		Soil								Sampled: 09/07/09 15:30
Mercury	7471A Dry	ND	0.0082	0.026	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:44	
SSI0049-06 (G-RS7SED-4-090709)		Soil								Sampled: 09/07/09 15:25
Mercury	7471A Dry	ND	0.0075	0.024	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:49	
SSI0049-07 (G-RS2SED-3-090709)		Soil								Sampled: 09/07/09 16:15
Mercury	7471A Dry	ND	0.0077	0.024	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:01	
SSI0049-08 (G-RS2SED-0-090709)		Soil								Sampled: 09/07/09 16:20
Mercury	7471A Dry	0.021	0.0078	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:05	J
SSI0049-09 (G-EB-090709)		Water								Sampled: 09/07/09 17:00
Mercury	7470A	ND	0.000041	0.00020	mg/L	1x	50776	09/23/09 15:17	09/23/09 17:35	
SSI0049-10 (G-RS5SED-0-090809)		Soil								Sampled: 09/08/09 08:30
Mercury	7471A Dry	ND	0.0080	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:10	
SSI0049-11 (G-RS5DSED-0-090809)		Soil								Sampled: 09/08/09 08:35
Mercury	7471A Dry	ND	0.0081	0.026	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:15	

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.


Randee Decker, Project Manager



Golder Associates, Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA 98077

Project Name: **Avery Landing**
Project Number: 073-93312-03
Project Manager: Doug Morell

Report Created:
10/28/09 14:26

Mercury (CVAA)
TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SSI0049-12 (G-RS5SED-4-090809) Soil Sampled: 09/08/09 08:45										
Mercury	7471A Dry	0.013	0.0068	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:19	J
SSI0049-13 (G-RS6SED-0-090809) Soil Sampled: 09/08/09 07:40										
Mercury	7471A Dry	0.020	0.0083	0.026	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 14:11	J
SSI0049-14 (G-RS6SED-3-090809) Soil Sampled: 09/08/09 07:35										
Mercury	7471A Dry	ND	0.0080	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:23	
SSI0049-15 (G-RS3SED-4-090809) Soil Sampled: 09/08/09 11:15										
Mercury	7471A Dry	0.0099	0.0071	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:27	J
SSI0049-16 (G-RS3SED-0-090809) Soil Sampled: 09/08/09 11:10										
Mercury	7471A Dry	0.0085	0.0079	0.025	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:32	J
SSI0049-17 (G-RS4SED-0-090809) Soil Sampled: 09/08/09 12:20										
Mercury	7471A Dry	ND	0.0071	0.022	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:37	
SSI0049-18 (G-RS4SED-4-090809) Soil Sampled: 09/08/09 12:25										
Mercury	7471A Dry	0.020	0.0066	0.021	mg/Kg dry	1x	50676	09/22/09 11:48	09/22/09 15:41	J

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.


Randee Decker, Project Manager



E

Avery Landing Site ARARs

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Appendix E: Potential Applicable or Relevant and Appropriate Requirements

Standard, Requirement, Criterion, or Limitation	Citation	Description	ARAR
Applicable			
Federal			
Resource Conservation and Recovery Act (RCRA), Identification and Management of Hazardous Wastes	40 CFR 261 et seq.	Specifies how to determine whether a solid waste is considered hazardous (whether listed or based on characteristic) and how to manage hazardous wastes.	Applicable
Clean Air Act (CAA), National Ambient Air Quality Standards	42 USC 7401 et seq. 40 CFR 50	Provides air quality standards for six criteria pollutants, including particulate matter, to protect public health and welfare.	Applicable
Toxic Substances Control Act	15 U.S.C § 2601 et seq.	Provides requirements for reporting, record-keeping, testing, and disposal of certain chemical substances and/or mixtures, including polychlorinated biphenyls [PCB]s.	Applicable if PCB concentrations exceed specific thresholds
Hazardous Materials Transportation Act	49 USC 1801-1813 49 CFR 107, 171-177	Regulates the transportation of hazardous waste.	Applicable (if off-site disposal of hazardous materials is included in cleanup action)
Clean Water Act--National Pollution Discharge Elimination System	33 USC § 1342	Establishes requirements for point source discharges and storm water runoff.	Applicable for any point source discharge of pollutants to surface water, including storm water runoff at the site. If response activities at the site involve clearing, grading, excavating, or other response activities that will disturb more than one acre of land resulting in storm water discharges, such activities must also comply with the substantive requirements for a Construction Stormwater General Permit to prevent or minimize the discharge of pollutants in storm water runoff from the disturbed areas to waters of the United States.
Endangered Species Act (ESA)	16 U.S.C. §§ 1531 – 1544 50 CFR Parts 17, 402	Provides for the protection of species of fish, wildlife, and plants that are listed as threatened or endangered with extinction. It also protects designated critical habitat for listed species. The Act outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species, including consultation with resource agencies.	Applicable to the site for listed and proposed to be listed threatened or endangered species and their habitat areas which will, or could, be impacted by removal action. Consistent with ESA Section 7, if any federally designated threatened or endangered species, listed or proposed to be listed, are identified in the vicinity of removal work, and the action may affect such species and/or their habitat, EPA is to consult with the Department of the Interior to ensure such actions are conducted in a manner to avoid adverse habitat modification and jeopardy to the continued existence of such species.
Fish and Wildlife Coordination Act	16 U.S.C. § 661 <i>et seq</i>	Requires that adequate provision must be made for the conservation, maintenance, and management of wildlife resources and habitat and requires consultation with the U.S. Fish and Wildlife service and appropriate state agencies.	Applicable to the site since listed threatened or endangered species habitat areas will, or could, be impacted by response action.
Migratory Bird Treaty Act (MBTA)	16 USC § 703 <i>et seq</i>	Makes it unlawful to “hunt, take, capture, kill” or take various other actions adversely affecting a broad range of migratory birds, including tundra swans, hawks, falcons, songbirds, without prior approval by the U.S. Fish and Wildlife Service. (See 50 CFR 10.13 for the list of birds protected under the MBTA.) Under the MBTA, permits may be issued for take (e.g., for research) or killing of migratory birds (e.g., hunting licenses). The mortality of migratory birds due to ingestion of contaminated sediment is not	Applicable for protecting migratory bird species identified. The selected removal action to be carried out in a manner that avoids the taking or killing of protected migratory bird species, including individual birds or their nests or eggs.

Appendix E: Potential Applicable or Relevant and Appropriate Requirements

Standard, Requirement, Criterion, or Limitation	Citation	Description	ARAR
National Historic Preservation Act	16 USC § 470f; 36 CFR Parts 60, 63, 800	a permitted take under the MBTA. Requires federal agencies to consider the possible effects on historic sites or structures of any actions proposed for federal funding or approval. Historic sites or structures are those included on or eligible for the National Register of Historic Places, generally older than 50 years. If an agency finds a potential adverse effect on historic sites or structures, such agency must evaluate alternatives to “avoid, minimize, or mitigate” the impact, in consultation with the State Historic Preservation Office (SHPO).	Potentially applicable to removal actions if there is to be demolition of old mine, mill, or structures on the Site. In consultation with the SHPO, unavoidable impacts on historic sites or structures may be mitigated through such means as taking photographs and collecting historic records.
Archaeological Resources Protection Act	16 USC § 470aa <i>et seq.</i> ; 43 CFR Part 7	Prohibits the unauthorized disturbance of archaeological resources on public or Indian lands. Archaeological resources are “any material remains of past human life and activities which are of archaeological interest,” including pottery, baskets, tools, and human skeletal remains. The unauthorized removal of archaeological resources from public or Indian lands is prohibited without a permit, and any archaeological investigations at a site must be conducted by a professional archeologist.	Applicable for the conduct of any selected response actions that may result in ground disturbance.
American Indian Religious Freedom Act	42 USC § 1996 <i>et seq</i>	The American Indian Religious Freedom Act and implementing regulations are intended to protect Native American religious, ceremonial, and burial sites, and the free practice of religions by Native American groups. The requirements of this Act must be followed if sacred sites graves are discovered in the course of ground-disturbing activities.	Potentially applicable to a site where response actions involve disturbance/alteration of the ground and/or site terrain.
Native American Graves Protection and Repatriation Act	25 USC § 3001 <i>et seq</i> 43 CFR Part 10 25 USC 3001 <i>et seq.</i> 43 CFR 10	Intended to protect Native American graves from desecration through the removal and trafficking of human remains and “cultural items” including funerary and sacred objects. The requirements of this Act must be followed when graves are discovered or ground-disturbing activities encounter Native American burial sites.	Potentially applicable to a site where response actions involve disturbance/alteration of the ground and/or site terrain.
Protection of Wetlands	Executive Order 11,990	Requires that potential impacts to wetlands be considered, and as practicable, destruction, loss, or degradation of wetlands be avoided. EPA promulgated regulations to implement this Executive Order under 40 CFR Part 6.	Applicable to a removal action that take place in wetlands at a site
<i>State of Idaho</i>			
Idaho Ground Water Quality Rule	IDAPA 58.01.11	Provides standards for the protection of groundwater in the State of Idaho. Establishes Primary Constituent Standards for the protection of human health.	Applicable for the protection of human health related to ground water uses; site located in the State of Idaho.
Idaho Water Quality Standards	IDAPA 58.01.02	Provides standards for the protection of surface water in the State of Idaho.	Applicable for the protection of surface water, including any discharges to the St. Joe River during a removal action; site is located in the State of Idaho.
Rules for the Control of Air Pollution in Idaho	IDAPA 58.01.01	Provides for the control of air pollution in Idaho	Applicable for any air discharges during a removal action; site is located in the State of Idaho.
Idaho Land Remediation Rules	IDAPA 58.01.18	Provides regulations for the cleanup of sites based on risk to human health and the environment where releases or threatened release of hazardous substances or petroleum exists.	Applicable for the cleanup of site based on risk to human health and the environment; site is in the State of Idaho.
Rules and Standards for Hazardous Waste	IDAPA 58.01.05	Regulates the handling and disposal of hazardous wastes.	Applicable for the handling and disposal of hazardous waste in the State of Idaho.
Solid Waste Management	IDAPA 58.01.06	Regulates the handling and disposal of solid waste.	Applicable for the handling and disposal of solid waste in the State of Idaho.

Relevant and Appropriate			
<i>Federal</i>			
National Primary Drinking Water Standards	40 CFR 141	Establishes drinking water regulations (Maximum Contaminant Levels [MCLs] and Maximum Contaminant Level Goals [MCLGs]) for primary water systems.	Relevant and appropriate (state has Ground Water Quality Rule for protection of human health)
Oil Pollution Prevention, Spill Prevention, Control, and Countermeasure (SPCC)	40 CFR Part 112	Requires facilities that could reasonably be expected to discharge oil in quantities that may be harmful into navigable waters of the United States and adjoining shorelines to develop and implement SPCC Plans.	Potentially relevant and appropriate because of ongoing discharges of oil to navigable waters of the United States
<i>State of Idaho</i>			
None			
Under To Be Considered (TBC) Materials			
EPA Regional Screening Levels (RSLs)	EPA RSL Table http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm	Provides risk-based screening levels for chemical contaminants at Superfund sites.	May be TBC material
Idaho Risk Evaluation Manual	IDEQ 2004, Idaho Risk Evaluation Manual.	Presents Initial Default Target Levels (IDTLs), which are risk-based concentrations derived from standardized equations that combine default exposure assumptions with EPA toxicity data. The IDTLs are considered to be protective for humans over a lifetime and meeting these levels allows unrestricted (residential) use of the property.	May be TBC material
Regional Sediment Evaluation Team, Freshwater Sediment Screening Levels for the Pacific Northwest	Regional Sediment Evaluation Team (RSET), 2006, Interim Final Sediment Evaluation Framework for the Pacific Northwest.	Presents sediment screening levels for the Pacific Northwest, including the State of Idaho.	May be TBC material
Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems	MacDonald, D.D., T. Berger, K. Wood, J. Brown, T. Johnsen, M.L. Haines, K. Brydges, M.J. MacDonald, S.L. Smith, and D.D. Shaw, 1999, A Compendium of Environmental Quality Benchmarks.	Provides consensus-based sediment quality guidelines; used for compounds for which RSET standards were not available.	May be TBC material
Surface water benchmarks	Suter, G.W. and C.L. Tsao, 1996, Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision Oak Ridge National Laboratory, Oak Ridge, TN, ES/ER/TM.	Provides alternate surface water benchmarks for compounds that do not have State of Idaho standards.	May be TBC material

Key:

ARAR = Applicable or Relevant and Appropriate Requirement
 CFR = Code of Federal Regulations
 CAA = Clean Air Act
 CWA = Clean Water Act
 EPA = United States Environmental Protection Agency
 ESA = Endangered Species Act
 IDAPA = Idaho Administrative Procedures Act
 IDEQ = Idaho Department of Environmental Quality
 IDTL = Initial Default Target Levels
 MBTA = Migratory Bird Treaty Act
 MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal
 NPDES = National Pollution Discharge Elimination System
 RCRA = Resource Conservation and Recovery Act
 RSET = Regional Sediment Evaluation Team
 RSL = Regional Screening Level
 SHPO = State Historic Preservation Office
 SPCC = Spill Prevention, Control, and Countermeasure
 TBC = to be considered
 USC = United States Code

F

Soil Washing Treatability Study, ART Engineering 2009

(not including Attachment C, Analytical Data Reports)

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SOIL WASHING TREATABILITY STUDY REPORT

AVERY LANDING SITE, AVERY, ID

December 14, 2009

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Table of Contents

EXECUTIVE SUMMARY.....	3
1.0 Introduction.....	4
2.0 Purpose and Scope	4
3.0 Sample Collection and Initial Soil Analysis	5
3.1 Sample Collection	5
3.2 Sample Compositing.....	5
3.3 Soil Homogenization, Screening at 12.5 mm (1/2") and Gravel Washing ..	6
3.4 Determination of Soil Particle Size Distribution.....	6
3.5 Untreated Soil Analysis.....	7
3.6 Washed Coarse Gravel (+12.5 mm) Chemical Analysis	7
4.0 Soil Washing Process Testing	7
4.1 Wet Screening	7
4.2 Sand Separation	8
4.3 Sand Washing Tests	8
4.4 Simulated Fines Filter Cake Analysis.....	9
4.5 Wash Water Clarification and Analysis	9
5.0 Full Scale Soil Washing	10
5.1 Process Description	10
5.2 Projected Plant Product “In-Out” Mass Balance for Full-Scale Soil Washing	12
5.3 Filter Cake Disposal	13
5.4 Soil Washing Plant Production Rate	13
6.0 Conclusions	13

TABLES

Table 1:	Results Dry Screening at 12.5 mm (1/2")
Table 2:	Particle Size Distribution - Soil Fraction less than 12.5 mm
Table 3:	Particle Size Distribution recalculated for Whole Soil
Table 4:	Analytical Results - Untreated Soil
Table 5:	Analytical Results - Washed Coarse Gravel (+12.5 mm)
Table 6:	Results Hydrocarbon Analysis - Washed Fine Gravel (2.0 - 12.5 mm)
Table 7:	Analytical Results Soil Washing Tests - Composite 1
Table 8:	Analytical Results Soil Washing Tests - Composite 2
Table 9:	Analytical Results Soil Washing Tests - Composite 3
Table 10:	Analytical Results Soil Washing Tests - Sample TS2U
Table 11:	Comparison Soil Washing Results for all Samples
Table 12:	Results Hydrocarbon and PAH analysis for Simulated Filter Cake
Table 13:	Analytical Results Soil Washing Wash Water
Table 14:	Projected Soil Washing Product "in-out" Mass Balance on 1,000 Ton Basis

FIGURES

Figure 1:	Site Location Map
Figure 2:	Treatability Study Sampling Plan
Figure 3:	Soil Washing Treatability Study Flow Diagram
Figure 4:	Schematic Process Flow Diagram for Full Scale Soil Washing Treatment

APPENDICES

Appendix A:	Treatability Study Photos
Appendix B:	Treatability Study Raw Data Collection Sheets
Appendix C:	Analytical Data Reports
Appendix D:	Analytical Results for Field Composite Soil Samples prepared by Golder

EXECUTIVE SUMMARY

This report presents and summarizes the results of soil washing treatability study performed by ART Engineering, LLC (ART) for soil samples collected from the Avery Landing Site, Avery, Idaho (Site). Samples were collected by Golder Associates, Inc. (Golder) on behalf of Potlatch Land and Lumber, LLC (Potlatch). Chemical analysis was performed by TestAmerica, Spokane, Washington.

A total of four (4) samples were evaluated in this study. Three (3) composite samples were collected from the saturated zone and one (1) sample (Sample TS2U) was collected from surface soils in the unsaturated zone. The samples evaluated in this study contain an average of 70.2% by weight gravel (>2.0 mm), 25.3% sand (0.038 – 2.0 mm), and 4.5% fines (<0.038 mm) as measured on dry weight basis. This particle size distribution is favorable for a soil washing process. The results of this study indicate that hydrocarbon removal efficiencies for TPH-Diesel and Heavy Oil Range Hydrocarbons in the range of 96% to 97% can be achieved. For the three composite samples, the average hydrocarbon concentration in the washed sand product was 115 mg/kg for TPH-Diesel, and 91 mg/kg for Heavy Oil Range Hydrocarbon. The use of a surfactant improved contaminant removal efficiency for Composite #1, but did not have a beneficial effect for other samples evaluated in this study. The use of elevated temperature did not provide any significant beneficial effect and is not recommended.

For sample TS2U, the hydrocarbon concentration in the washed sand product, without flotation, was 3,280 mg/kg for TPH-Diesel and 4,000 mg/kg for Heavy Oil Range Hydrocarbon. After flotation, hydrocarbon levels were 2,470 mg/kg for TPH-Diesel and 3,040 mg/kg for Heavy Oil Range Hydrocarbon. The use of flotation increased the contaminant removal efficiency for Sample TS2U from 69% to 77% by removal of asphaltic particles in the flotation concentrate. The lower contaminant removal efficiency achieved for Sample TS2U, may be the result of presence of asphaltic particles which were not observed in the composite samples collected from the saturated zone.

The results of this study show that significant hydrocarbon removal can be achieved for washed gravel and sand fractions (totaling 95% of the soil mass on a dry weight basis) at the Site through the use of soil washing. The hydrocarbons removed in the soil washing process will be concentrated and pressed into a fines filter cake for further treatment or disposal. In this study, the wash water was successfully treated to remove soil fines and dispersed hydrocarbon. This allows for the full-scale plant to be designed as a closed-loop system in which the water is continuously treated and reused. No normal water discharge would be required.

1.0 Introduction

This report presents and summarizes the soil washing treatability study results for the Avery Landing Site in Avery, Idaho (Site). The Site is located along State Highway 50, about 0.75 mile west of the town of Avery, Idaho (Figures 1 and 2).

Potlatch entered into Administrative Order on Consent (AOC) No 10-2008-0135 with the U.S. Environmental Protection Agency (EPA) to complete an Engineering Evaluation/Cost Analysis (EE/CA) for the Site. In support of the EE/CA, this soil washing treatability study was performed to provide data on soil washing treatment.

The following contaminants of concern have been identified for the Site soils:

- TPH-Diesel and Heavy Oil Range Hydrocarbons;
- Naphthalenes;
- PAHs (including carcinogenic PAHs).

Soil samples were collected by Golder Associates, Inc. (Golder) in the week of August 24 through 28, 2009. The samples were shipped to soil washing vendor ART Engineering, LLC (ART), in Tampa, Florida, for performance of a laboratory soil washing treatability study. Chemical analysis was performed by TestAmerica in Spokane, Washington, under contract to Golder.

2.0 Purpose and Scope

The scope of this treatability study was to evaluate the use of size separation and soil washing to clean soil samples collected from the Site. Soil washing is believed to have the highest potential for practical application for the Site. Petroleum compounds typically concentrate in the finer soil fractions (smaller particle sizes). In addition, larger size particles (e.g., gravel and coarse sand) are typically easier to clean by soil washing than smaller-size particles because the larger-size particles have less sorption capacity and are usually simply coated on the surface. However, the extent to which these factors apply can vary considerably in different soils.

By separating clean and contaminated size fractions, size separation reduces the quantity of material requiring disposal or further treatment. Soil washing removes contaminants from soil, thereby reducing the quantity of material requiring disposal or further treatment. Even when soil washing does not achieve cleanup levels, the contaminant reduction can reduce the difficulty and cost of further treatment. Thus, soil washing can function as stand-alone treatment, or as pre-treatment in conjunction with another technology (e.g., land treatment or thermal desorption).

The objective of the soil washing treatability study was to determine the residual TPH concentrations in various size fractions after size separation and soil washing. Based on the results of this study, a projected mass balance for application of full scale soil washing at the Site has been prepared.

The analytical results from the various soil fractions and residuals resulting from soil washing will be compared to the applicable site cleanup criteria by Golder as part of the EE/CA.

3.0 Sample Collection and Initial Soil Analysis

3.1 Sample Collection

Bulk samples of the soils in the “smear zone” impacted by LNAPL (from approximately 12 to 14 feet below ground surface) were obtained from six (6) locations at the Site, as shown on Figure 2. The test pits were located in areas where LNAPL has been found in wells during previous investigations. The test pits are spread throughout the eastern half of the Site in order to obtain aerial coverage across the portion of the Site where known LNAPL is present. The samples were obtained from test pits using an excavator. The bulk soil samples only contained soil from the LNAPL smear zone (i.e. “clean” soil was not collected for the bulk soil samples).

The soil from each test pit was placed on plastic sheets and mixed using the excavator bucket and/or shovels. Photographic documentation of field conditions and the test pits was performed by Golder.

During sampling, it was also found that unsaturated soils in several test pits were impacted with hydrocarbons. In order to evaluate if this soil would also be amenable to soil washing, an additional sample of surface soil was collected at Test Pit 2 (Sample TS2U) for evaluation in this study.

Two (2) 5-gallon buckets of soil from each test pit were shipped to ART in Tampa, Florida, for performance of the study. One (1) additional 5-gallon bucket of soil collected from the unsaturated surface soils at Test Pit 2 was also shipped to ART for evaluation. All samples were received in good condition by ART on September 17, 2009.

3.2 Sample Compositing

Prior to sample compositing, free standing water was decanted and soil homogenized and photographed (Photos 1 through 18). In accordance with the approved Treatability Study Workplan for the Avery Landing Site, Avery, Idaho by Golder dated June 23, 2009, three (3) composite samples were prepared as follows:

Composite #1 from TS-1 and TS-2;
Composite #2 from TS-3 and TS-5;
Composite #3 from TS-4 and TS-6.

Sample TS2U was evaluated as a separate sample.

Each composite sample was prepared by combining equal weights of the individual samples. The three (3) composite samples and Sample TS2U are indicative of the variability in the soil that might be treated.

Figure 3 shows a flow diagram of the soil washing treatability study. This approach is designed to simulate all of the steps in the soil washing process. Each of the composite samples and Sample TS2U were processed separately according to the flow diagram in Figure 3.

3.3 Soil Homogenization, Screening at 12.5 mm (1/2") and Gravel Washing

Each of the composite samples and Sample TS2U were homogenized and dry-screened at 12.5 mm (1/2"). Each of the soil fractions >12.5 mm and <12.5 mm were weighed. The coarse gravel fraction was washed using water at room temperature. The washed-off fines material were collected, dried and weighed. Photos of the soil fraction after dry screening and after washing are provided in Photos 19 through 32.

Results are presented in Table 1. The results indicate that the soil contains 47.2% coarse gravel (>12.5 mm) and 52.8% soil and fine gravel (<12.5 mm) on average as measured on a dry weight basis. This soil distribution is not corrected for adhering soil present in the coarse gravel fraction greater than 12.5 mm. A correction for adhering soil is provided in Section 3.4 (Table 3).

3.4 Determination of Soil Particle Size Distribution

The particle size distribution on the soil fraction less than 12.5 mm (1/2") was determined through wet screening. Results are provided in Table 2. Using this data, the particle size distribution for the whole soil, including soil fraction >12.5 mm, was recalculated. Results are presented in Table 3.

The soil particle size distributions for each of the samples are very similar containing approximately 70.2% gravel (>2.0 mm), 25.3% sand (0.038 – 2.0 mm) and 4.5% fines (less than 38 micron) by weight on average as measured on dry weight basis.

3.5 Untreated Soil Analysis

The untreated soil fraction <12.5 mm (Sample “B”) and soil fraction <2.0 mm (Sample “C”) were analyzed for contaminants of concern. The results are presented in Table 4. From the samples collected from the smear zone, Composite #1 was found to contain the highest concentration of hydrocarbon of 7,440 mg/kg TPH-Diesel and 4,530 mg/kg Heavy Oil Range Hydrocarbon.

The sample of surface soil, Sample TS2U, collected from the unsaturated zone, was found to contain the highest concentration of hydrocarbon of 10,700 mg/kg TPH-Diesel and 13,000 mg/kg Heavy Oil Range Hydrocarbon. It was also noticed that this sample contained asphaltic tar particles which were not observed in the samples collected from the smear zone.

Guided by the results of prior analysis of samples collected by Golder during the Site sampling efforts, only Composite #3 and Sample TS2U were selected to be analyzed for PCB. Levels of PCB detected were low, respectively 0.107 mg/kg and 0.313 mg/kg.

3.6 Washed Coarse Gravel (+12.5 mm) Chemical Analysis

The washed coarse gravel fraction greater than 12.5 mm was analyzed for SPLP leachable hydrocarbon and PAH. Composite #3 was also analyzed for PCB. Results are presented in Table 5.

The results indicate that the washed coarse gravel contains low levels of leachable hydrocarbon measured by SPLP and low levels of total PAH and PCB.

4.0 Soil Washing Process Testing

The soil fraction <12.5 mm (Sample “B”) was processed through wet screening at 2 mm and hydraulic separation at approximately 0.038 micron to simulate the full scale soil washing process. The fines fraction and wash water were flocculated and dewatered into the simulated filter cake.

4.1 Wet Screening

For each composite sample and Sample TS2U, approximately 5.0 kg of soil fraction less than 12.5 mm was processed through wet screening at 2.0 mm. The washed fine gravel (fraction 2.0-12.5 mm) was crushed and submitted for chemical analysis. It was noted that for Sample TS2U, the fine washed gravel (2.0 mm - 12.5 mm) contained asphaltic tar particles that were not observed in

the other composite samples (Photos 33 and 34). Analytical results are shown in Table 6.

The results indicate that the average hydrocarbon concentration in the washed fine gravel (2.0 – 12.5 mm) for Composites #1, #2 and #3 was 212 mg/kg TPH-Diesel and 237 mg/kg for Heavy Oil Range Hydrocarbon. For Sample TS2U, the fine gravel fraction (2.0 – 12.5mm) showed elevated levels of hydrocarbon. It is believed that the elevated hydrocarbon concentrations are related to the presence of the asphaltic material (Photos 33 and 34).

4.2 Sand Separation

For each of the composite samples, the sand fraction, and fines fraction were separated in the laboratory using a simulated hydrocyclone separation technique. The sand after separation was analyzed (Sample “F”) and used for subsequent washing tests. The fines and wash water were separated and used for clarification tests.

4.3 Sand Washing Tests

The objective of the washing tests was to determine the lowest possible hydrocarbon level in the sand fraction through use of water only washing, water and surfactant washing at ambient and elevated temperature. To evaluate if there would be an additional cleanup benefit of using flotation, additional flotation tests were performed using a Denver D12 flotation machine (Photos 35 through 40). All washing tests were performed on the sand fraction after hydraulic separation as indicated in the treatability study flow diagram (Figure 3).

The following washing tests were performed:

- Test 1) Water only Washing at ambient temperature (Sample “WS-1”);
- Test 2) Surfactant Washing at ambient temperature (Sample “WS-2”);
- Test 3) Surfactant Washing at 130° F (Sample “WS-3”);
- Test 4) Surfactant Washing with Flotation at ambient temperature (Sample “WS-4”);
- Test 5) Surfactant Washing with Flotation at 130° F on Composite 2 and Sample TS2U only (Sample “WS-5”).

Results of the washing tests are provided in Tables 7, 8, 9 and 10. A comparison of the results for each of the composite samples and Sample TS2U is provided in Table 11.

For Composites #1, #2 and #3, the average hydrocarbon concentration in the washed sand product after surfactant washing was 115 mg/kg for TPH-Diesel and 91 mg/kg for Heavy Oil Range Hydrocarbon. Typical hydrocarbon removal

efficiencies were achieved in the range of 96% to 99%. The removal efficiencies for PAH were in similar range indicating that the PAH are present within the oil phase. For each of the composite samples, the use of a surfactant improved contaminant removal efficiency for Composite #1, but did not have a beneficial effect for other samples evaluated in this study. The use of flotation did not improve contaminant removal efficiency for Composites #1, #2 and #3. Also, the use of elevated temperature did not provide any significant contaminant removal benefits.

For sample TS2U, the hydrocarbon concentration in the washed sand product (without flotation) was 3,280 mg/kg for TPH-Diesel and 4,000 mg/kg for Heavy Oil Range Hydrocarbon. After flotation, hydrocarbon levels were 2,470 mg/kg for TPH-Diesel and 3,040 mg/kg for Heavy Oil Range Hydrocarbon. The use of flotation did increase contaminant removal efficiency for Sample TS2U from 69% to 77% by removal of tar particles in the flotation concentrate (Photos 39 and 40). For Sample TS2U, the use of elevated temperature did not provide any significant contaminant removal benefits. For Sample TS2U, the removal efficiency after surfactant washing, and without flotation, was significantly lower at 69% as compared to removal efficiency of 96% to 99% achieved for Composites #1, #2 and #3. The likely explanation of this difference is that Sample TS2U contained asphaltic particles (Photos 33 and 34) in all size fractions. The asphaltic particles were not observed in the composite samples collected from the saturated zone.

4.4 Simulated Fines Filter Cake Analysis

The wash water containing fines and dispersed hydrocarbon was successfully flocculated and clarified (Photos 41 through 44). The settled fines were dewatered into a simulated filter cake by squeezing the fines material against a fine metal wire mesh. The simulated filter cake was submitted for chemical analysis. Results are presented in Table 12.

The results indicate that the filter cake contains elevated concentration of hydrocarbons. The filter cake maybe treated further by thermal methods or disposed at an off-site landfill.

4.5 Wash Water Clarification and Analysis

The clarified wash water after flocculation was decanted and analyzed for hydrocarbon and a wide range of analytical compounds (Photos 41 through 44). The analytical results for detected analytes are provided in Table 13. The results of the full list of analytical parameters are provided in Appendix C.

The clarified water is of sufficient quality to allow for normal reuse as wash water in a full-scale soil washing system.

5.0 Full Scale Soil Washing

5.1 Process Description

A generic process flow diagram (PFD) for soil washing as it could be performed for the Site is shown in Figure 4.

This process would involve the following main processing steps:

- Pre-screening to 75 mm;
- Plant feeding;
- Wet screening and gravel washing;
- Separation of sand from fines and hydrocarbon;
- Sand rinsing and dewatering;
- Water clarification and fines dewatering;
- Process water reuse.



Mobile Soil Washing Plant

The main treatment steps are described in the following paragraphs.

Soil Excavation and Plant Feed Management

The two key plant design parameters for plant feed for this project are: 1) Soil particle size distribution; and 2) Level of contamination. To obtain the optimum plant efficiency in terms of plant production rate and achieving the desired cleanup standard, it is required that the plant feed stay within the design parameters. Therefore, it is essential that a comprehensive site excavation, blending and staging plan be developed and followed to prepare the soil for soil washing. If the soil washing is

performed concurrent with excavation, than adjustments to field excavation can be made easily to optimize performance of the soil washing system.

Pre-Screening

This unit consists of a 75 mm dry vibratory screen. The purpose of this equipment is to remove coarse material larger than 75 mm as preparation for introduction of the soil into the soil washing plant.

Plant Feeding

The plant is fed using a feed hopper with “walking floor.” The feed hopper floor is equipped with a variable speed drive, which is used to adjust the feed rate to the system. The plant feed conveyor then delivers the feed to the wet screening unit. A belt scale on the plant feed conveyor measures the tons per hour being fed to the wet screen. The feed rate into the plant can be adjusted by adjusting the feed hopper floor speed to match the desired feed into the plant.

Wet Screening & Gravel Washing

This unit consists of a wet vibrating screen, a collection sump and an oversize conveyor. The vibrating screen will separate the gravel material. Spray nozzles installed above the screen deck break down the soil and wash the gravel particles. The gravel material is stockpiled by oversize conveyor. Pressurized wash water is obtained from the process recycle water tank. The sand and fines slurry passing through the screen is forwarded for sand/fines hydraulic separation.

Separation of Sand, Fines and Hydrocarbon

This unit separates the sand and fines at the selected separation diameter (cut-point). This unit includes one or multiple hydrocyclones and/or sand screw combination (processing details to be determined). The fines and emulsified hydrocarbon are separated from the sand. The sand is directed to sand rinsing and dewatering unit. The fines fraction containing adsorbed and emulsified hydrocarbon is directed to the water clarification and fines dewatering unit.

Sand Rinsing and Dewatering

The sand fraction after separation of hydrocarbon and fines will be rinsed with clean process water and dewatered. The dewatered clean sand will be stockpiled by means of a radial stacker.

Water Clarification and Fines Dewatering

This unit contains water treatment systems to separate fines and dispersed oils from the wash water. Water treatment chemicals are used to break the emulsion and separate the fines from the wash water. The clarified wash water is then fed to a process water tank for reuse in the washing process. The fines and hydrocarbon are dewatered into a solid filter cake residue containing approximately 50% dry solids by weight. The hydrocarbons are bound within the filter cake matrix. The filter cake residue is a dry stackable product, which only contains bound moisture, but no free water. If filter cake is spread out and allowed to dry on open air before shipment to an off-site landfill, additional drying of filter cake can be achieved. Effectiveness of drying will depend on local weather conditions and season. The filter cake can be treated further or disposed at an appropriate off-site landfill.

Process Water Reuse

All water used in the soil washing process is recycled (system designed as closed loop system). Because of loss of bound water with the filter cake and evaporation losses, the soil washing process is a net consumer of water. Typical make-up water requirement for the soil washing process is in the range of 20 to 30 gpm. No normal discharge of water is required.

A design provision is normally made to allow for occasional discharge of excess process water from rain events resulting in excess water in the system. Rain water or overflow water collected from the plant pad, is normally collected in an in-ground sump and pumped back into the soil washing process or into a holding tank.

Fugitive Dust

As the soil washing process is a wet process, the washing process does not generate fugitive dust. Any fugitive dust from excavated soil or staged soils is mitigated by keeping the soil moist.

5.2 Projected Plant Product “In-Out” Mass Balance for Full-Scale Soil Washing

A projected mass balance for soil washing operations based on 1,000 tons of plant feed has been calculated (Table 14). This projected mass balance is based on the calculated average particle size distribution on a dry weight basis as presented in Table 3. For purpose of the mass balance, typical moisture

content values have been assumed for the oversize, sand and fines products based on ART's general project experience. Based on the results of this study, 95% of the soil material can be reclaimed for clean backfill at the Site. For every 1,000 tons of soil treated, it is estimated that 83 tons of filter cake residue will be produced. The filter cake residue may be further reduced by air drying before final disposal.

5.3 Filter Cake Disposal

The filter cake residue that would be produced by soil washing may be treated further (e.g., thermal desorption) or disposed at an off-site landfill.

5.4 Soil Washing Plant Production Rate

Based on the nature of the soil samples in this study, ART anticipates that a soil washing plant throughput rate in the range of 50 to 60 tph is reasonable.

6.0 Conclusions

The conclusions and recommendations based on the results of this study are as follows:

1. The results of the treatability study indicate that soil washing is an effective technology for cleaning of soils excavated from the smear zone at ground water level at the Site. The results of this study show that significant hydrocarbon removal can be achieved for washed gravel and sand fractions (totaling 95% of the soil mass on a dry weight basis) at the Site through the use of soil washing.
2. The use of a surfactant improved the contaminant removal efficiency for Composite #1, but did not have a beneficial effect for other samples evaluated in this study. The use of elevated temperature did not provide any significant contaminant removal benefits.
3. For Composites #1, #2 and #3 collected from the saturated zone, typical hydrocarbon and PAH removal efficiencies were achieved in the range of 96% to 99%. The average hydrocarbon concentration analyzed in the washed sand product after surfactant washing was 115 mg/kg for TPH-Diesel and 91 mg/kg for Heavy Oil Range Hydrocarbon. The average hydrocarbon concentration in the fine gravel fraction (2.0 – 12.5 mm) was 212 mg/kg TPH-Diesel and 237 mg/kg for Heavy Oil Range Hydrocarbon. The SPLP leachable hydrocarbon levels in the coarse gravel fraction > 12.5 mm were non-detectable for TPH-Diesel and very low for Heavy Oil Range Hydrocarbon.

4. For Sample TS2U collected from the unsaturated zone, the hydrocarbon concentration was in the washed sand product, without flotation, was 3,280 mg/kg for TPH-Diesel and 4,000 mg/kg for Heavy Oil Range Hydrocarbon. The use of flotation did increase contaminant removal efficiency for Sample TS2U from 69% to 77% by removal of tar particles in the flotation concentrate. After flotation, hydrocarbon levels were 2,470 mg/kg for TPH-Diesel and 3,040 mg/kg for Heavy Oil Range Hydrocarbon. The lower contaminant removal efficiency achieved for Sample TS2U maybe the result of the presence of asphaltic particles which were not observed in soil samples from the saturated zone.
5. Wash water was treated to remove soil fines and dispersed hydrocarbon. This water would be acceptable for reuse in the plant.
6. The full-scale soil washing technology to achieve these results is well understood and can be implemented at this Site. A plant production rate in the range of 50 to 60 tph is achievable.

Figures

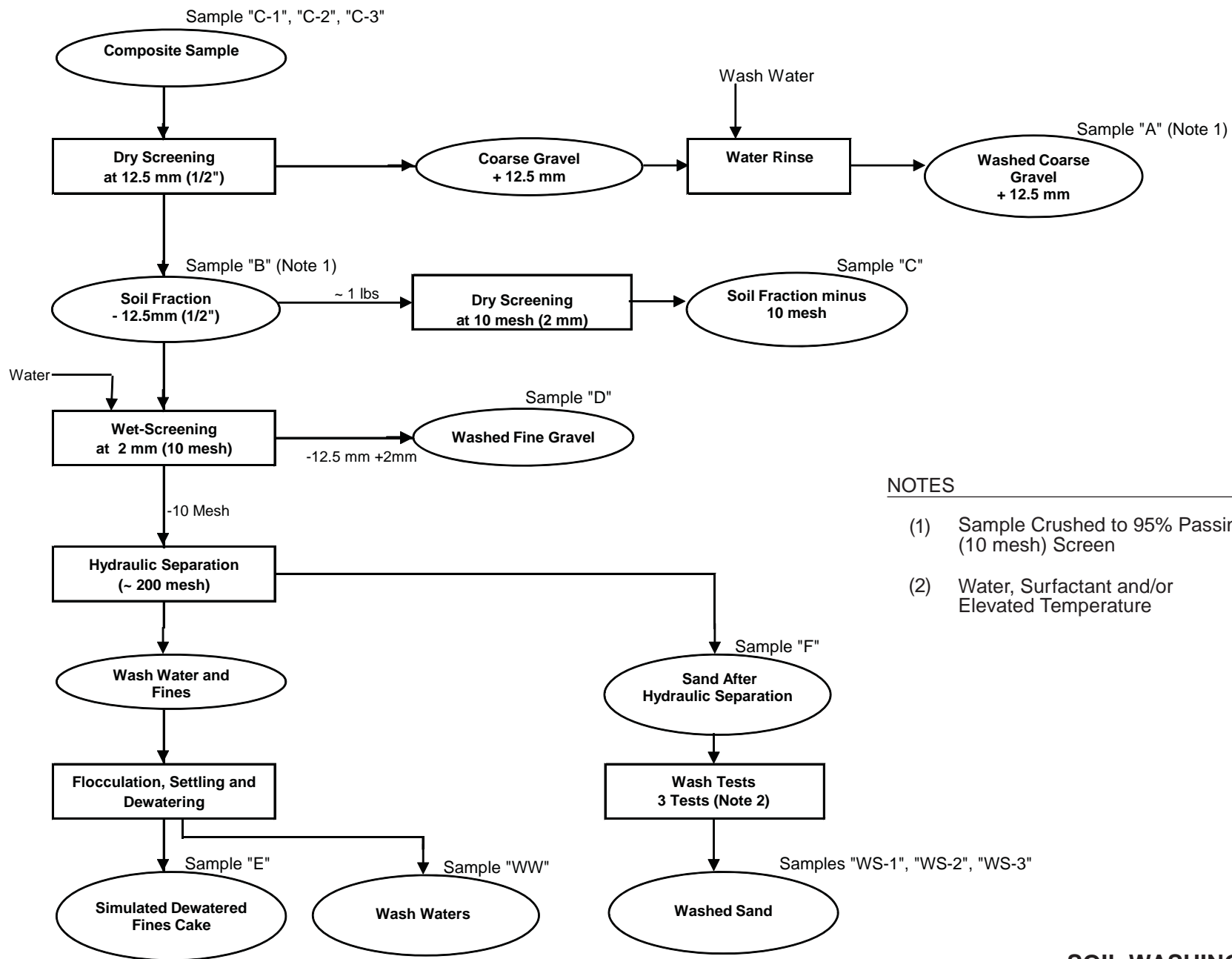


LEGEND

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> --- Property Line & Section 16-15 Division Line Site Boundary EPA Monitoring Well EPA Soil Boring Monitoring Well Domestic Well | <ul style="list-style-type: none"> ● Surface Water Sample Location ⊕ Proposed EE/CA Monitoring Well ▲ Proposed River Sediment and Floating LNAPL and Surface Water Sampling Location Proposed Test Pits for Soil Sampling Proposed Borehole for Soil Sampling Proposed Angled Borehole for Soil Sampling | <ul style="list-style-type: none"> Treatability Study Test Pits |
|---|--|--|



FIGURE 2
TREATABILITY STUDY SAMPLING LOCATIONS
 WORK PLAN AVERY LANDING SITE/WA



NOTES

- (1) Sample Crushed to 95% Passing 2 mm (10 mesh) Screen
- (2) Water, Surfactant and/or Elevated Temperature

Modification of Figure Provided by ART Engineering, LLC

0739331202002fig03_R1.ai | Mod: 04/30/09 | AMP

FIGURE 3
SOIL WASHING TREATABILITY
STUDY FLOW DIAGRAM
POTLATCH/AVERY LANDINGEE/CAPLANS/ID

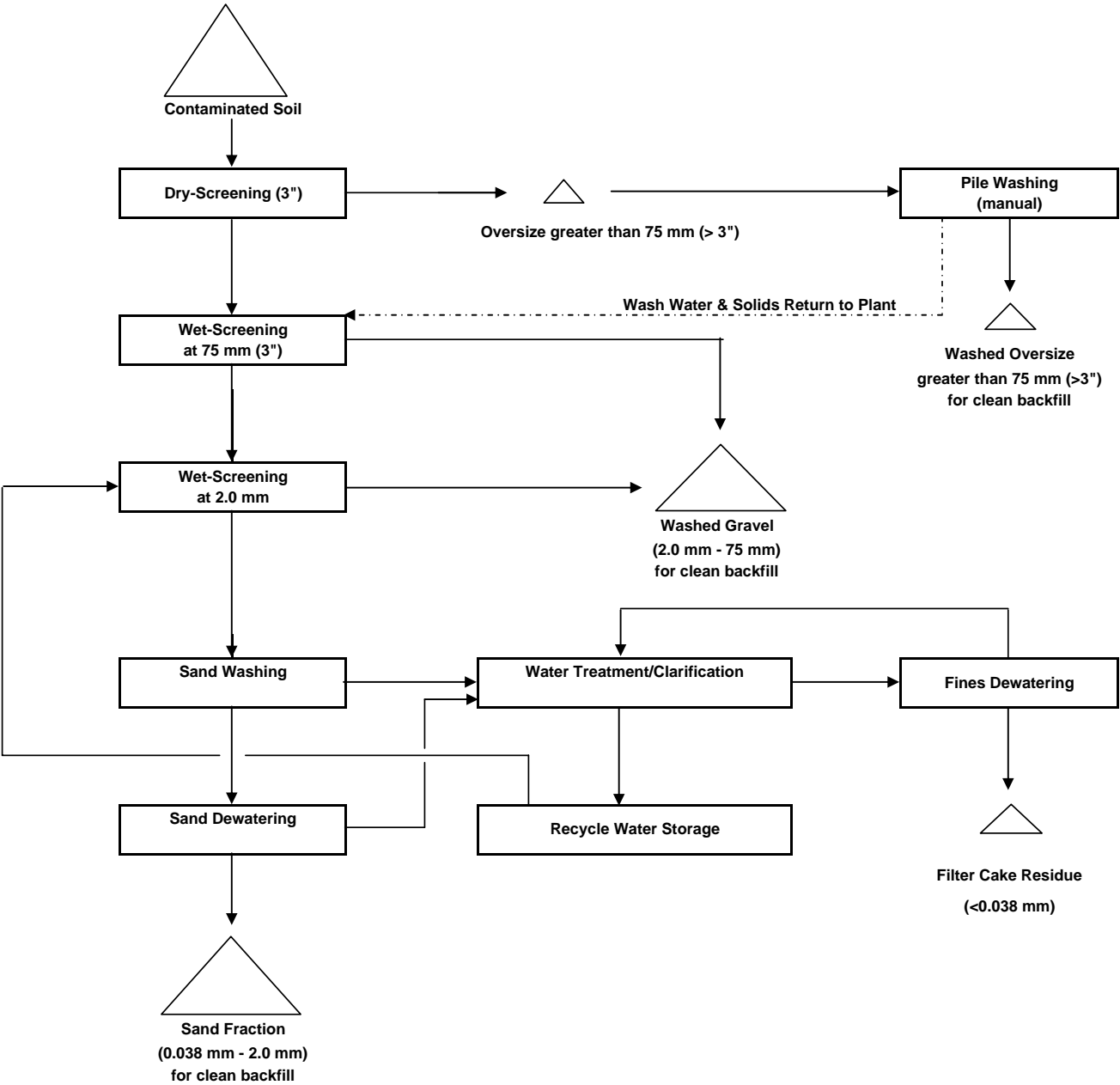


Figure 4: Schematic Process Flow Diagram for Full Scale Soil Washing Treatment

Tables

Table 1: Results Dry Screening at 12.5 mm (1/2")

	Mass Ratio Soil Fraction greater then 12.5 mm and less than 12.5 mm after Dry Screening			Mass % by weight of adhering soil in soil fraction > 12.5 mm after dry screening	Corrected Mass Ratio on Dry Weight Basis - Soil Fraction greater then 12.5 mm and less than 12.5 mm		
	Soil Fraction > 12.5 mm	Soil Fraction <12.5 mm	Total	(%)	Soil Fraction > 12.5 mm	Soil Fraction <12.5 mm	Total
Composite 1	52.2%	47.8%	100.0%	5.8%	49.2%	50.8%	100.0%
Composite 2	52.0%	48.0%	100.0%	5.7%	49.0%	51.0%	100.0%
Composite 3	60.4%	39.6%	100.0%	7.6%	55.8%	44.2%	100.0%
TS2U	37.0%	63.0%	100.0%	6.3%	34.7%	65.3%	100.0%
Average				6.4%	47.2%	52.8%	

Table 2: Particle Size Distribution - Soil Fraction less than 12.5 mm

Size Fraction	Mass Distribution on Dry Weight Basis (%) - Soil Fraction < 12.5 mm				
	Composite#1	Composite#2	Composite#3	TS2U	Average
4.75-12.5 mm	18.4%	30.6%	30.7%	25.3%	26.3%
2.0-4.75 mm	15.4%	19.0%	21.8%	14.6%	17.7%
1.0-2.0 mm	11.6%	11.5%	12.3%	11.0%	11.6%
0.5-1.0 mm	10.4%	12.3%	11.7%	13.5%	12.0%
0.25-0.5 mm	7.3%	8.7%	5.1%	12.7%	8.4%
0.125-0.25 mm	8.4%	5.4%	5.1%	6.8%	6.4%
0.075-0.125mm	6.5%	2.6%	2.7%	4.2%	4.0%
0.038-0.063 mm	8.4%	3.6%	3.7%	4.5%	5.1%
<0.038 mm	13.6%	6.3%	6.7%	7.3%	8.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Notes:

¹⁾: Mass Distribution calculated for whole soil including gravel fraction greater than 12.5 mm

Table 3: Particle Size Distribution recalculated for Whole Soil¹⁾

Size Fraction	Mass Distribution on Dry Weight Basis (%)				
	Composite#1	Composite#2	Composite#3	TS2U	Average
>12.5 mm	49.2%	49.0%	55.8%	34.7%	47.2%
4.75-12.5 mm	9.4%	15.6%	13.6%	16.5%	13.8%
2.0-4.75 mm	7.8%	9.7%	9.6%	9.6%	9.2%
1.0-2.0 mm	5.9%	5.9%	5.4%	7.2%	6.1%
0.5-1.0 mm	5.3%	6.3%	5.2%	8.8%	6.4%
0.25-0.5 mm	3.7%	4.4%	2.3%	8.3%	4.7%
0.125-0.25 mm	4.3%	2.7%	2.3%	4.4%	3.4%
0.075-0.125mm	3.3%	1.3%	1.2%	2.7%	2.1%
0.038-0.063 mm	4.3%	1.8%	1.7%	3.0%	2.7%
<0.038 mm	6.9%	3.2%	3.0%	4.8%	4.5%
Total	100.0%	100.0%	100%	100%	100.0%

Notes:

¹⁾: Mass Distribution calculated for whole soil including gravel fraction greater than 12.5 mm

Table 4: Analytical Results - Untreated Soil

Parameter	Units	Soil Screening Level (mg/kg)	Composite 1		Composite 2		Composite 3		TS2U	
			Soil Fraction < 12.5 mm	Soil Fraction < 2.0 mm	Soil Fraction < 12.5 mm	Soil Fraction < 2.0 mm	Soil Fraction < 12.5 mm	Soil Fraction < 2.0 mm	Soil Fraction < 12.5 mm	Soil Fraction < 2.0 mm
			Sample "B"	Sample "C"	Sample "B"	Sample "C"	Sample "B"	Sample "C"	Sample "B"	Sample "C"
TOTAL SOLIDS	%		84.8	82.9	88.6	86.1	89.4	82.2	90.6	88.8
HYDROCARBON ¹⁾										
Diesel Range Hydrocarbons	mg/kg	NSA	7,440	5,480	1,440	1,500	2,400	3,280	10,700	33,400
Heavy Oil Range Hydrocarbons	mg/kg	NSA	4,530	2,880	1,040	1,070	2,670	3,440	13,000	15,500
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾										
1-Methylnaphthalene	mg/kg	22	ND	NA	ND	NA	2.14	NA	ND	NA
2-Methylnaphthalene	mg/kg	310	0.121	NA	ND	NA	0.124	NA	1.20	NA
Acenaphthene	mg/kg	52.3	1.49	NA	ND	NA	0.671	NA	0.711	NA
Acenaphthylene	mg/kg	78	ND	NA	0.0803	NA	ND	NA	ND	NA
Anthracene	mg/kg	1040	1.07	NA	0.522	NA	0.472	NA	1.47	NA
Benzo (a) anthracene	mg/kg	0.15	0.220	NA	0.110	NA	ND	NA	0.442	NA
Benzo (a) pyrene	mg/kg	0.02	0.147	NA	ND	NA	0.112	NA	0.245	NA
Benzo (b) fluoranthene	mg/kg	0.15	0.142	NA	ND	NA	ND	NA	0.540	NA
Benzo (ghi) perylene	mg/kg	1178	0.152	NA	ND	NA	0.124	NA	0.270	NA
Benzo (k) fluoranthene	mg/kg	1.5	ND	NA	ND	NA	ND	NA	ND	NA
Chrysene	mg/kg	15	0.325	NA	0.171	NA	0.224	NA	0.662	NA
Dibenzo (a,h) anthracene	mg/kg	0.02	0.136	NA	ND	NA	ND	NA	ND	NA
Fluoranthene	mg/kg	364	0.435	NA	0.156	NA	ND	NA	1.69	NA
Fluorene	mg/kg	54.8	0.535	NA	0.346	NA	0.845	NA	ND	NA
Indeno (1,2,3-cd) pyrene	mg/kg	0.15	0.142	NA	ND	NA	0.124	NA	ND	NA
Naphthalene	mg/kg	0.078	0.278	NA	ND	NA	ND	NA	0.613	NA
Phenanthrene	mg/kg	79	0.666	NA	0.361	NA	1.06	NA	1.05	NA
Pyrene	mg/kg	359	0.985	NA	0.401	NA	0.348	NA	4.95	NA
POLYCHLORINATED BI-PHENYLS (PCB) ³⁾										
Aroclor-1016	mg/kg	3.9	NA	NA	NA	NA	ND	NA	ND	NA
Aroclor-1221	mg/kg	0.17	NA	NA	NA	NA	ND	NA	ND	NA
Aroclor-1232	mg/kg	0.17	NA	NA	NA	NA	ND	NA	ND	NA
Aroclor-1242	mg/kg	0.22	NA	NA	NA	NA	ND	NA	ND	NA
Aroclor-1248	mg/kg	0.22	NA	NA	NA	NA	ND	NA	ND	NA
Aroclor-1254	mg/kg	0.22	NA	NA	NA	NA	ND	NA	ND	NA
Aroclor-1260	mg/kg	0.22	NA	NA	NA	NA	0.107	NA	0.313	NA

Notes:

Shading indicates detection above lowest soil screening level.

NSA: No Screening Level Available

ND: not detected

NA: not analyzed

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

³⁾: PCB by method EPA 8082

Table 5: Analytical Results - Washed Coarse Gravel (+12.5 mm)

Table 5: Analytical Results - Washed Coarse Gravel (>12.5 mm)							
Parameter		Units	Soil Screening Level (mg/kg)	Washed Coarse Gravel Fraction > 12.5 mm (Sample "A")			
				Composite 1	Composite 2	Composite 3	TS2U
HYDROCARBON ¹⁾							
	Diesel Range Hydrocarbons	mg/kg	NSA	NA	NA	NA	NA
	Heavy Oil Range Hydrocarbons	mg/kg	NSA	NA	NA	NA	NA
HYDROCARBON - LEACHABLE BY SPLP ²⁾							
	Diesel (C10-C24)	mg/L	-	ND	ND	ND	ND
	Motor Oil (C24-C36)	mg/L	-	0.093	0.006	0.065	0.068
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾							
	1-Methylnapthalene	mg/kg	22	0.101	ND	0.00729	0.0285
	2-Methylnapthalene	mg/kg	310	0.0982	ND	0.00546	0.0271
	Acenaphthene	mg/kg	52.3	0.0473	ND	0.00546	0.0357
	Acenaphthylene	mg/kg	78	ND	ND	ND	ND
	Anthracene	mg/kg	1040	0.0630	ND	0.00501	0.0547
	Benzo (a) anthracene	mg/kg	0.15	0.0108	ND	ND	0.0131
	Benzo (a) pyrene	mg/kg	0.02	0.0054	ND	ND	0.00678
	Benzo (b) fluoranthene	mg/kg	0.15	0.0122	ND	ND	0.0158
	Benzo (ghi) perylene	mg/kg	1178	ND	ND	ND	0.00633
	Benzo (k) fluoranthene	mg/kg	1.5	0.0126	ND	ND	ND
	Chrysene	mg/kg	15	0.0185	ND	ND	0.0203
	Dibenzo (a,h) anthracene	mg/kg	0.02	ND	ND	ND	ND
	Fluoranthene	mg/kg	364	0.0455	ND	ND	0.0497
	Fluorene	mg/kg	54.8	0.0644	ND	0.00592	0.0416
	Indeno (1,2,3-cd) pyrene	mg/kg	0.15	ND	ND	ND	ND
	Naphthalene	mg/kg	0.078	0.0104	ND	ND	ND
	Phenanthrene	mg/kg	79	0.127	ND	0.00820	0.0845
	Pyrene	mg/kg	359	0.0815	ND	0.00501	0.108
POLYCHLORINATED BI-PHENYLS (PCB) ³⁾							
	Aroclor-1016	mg/kg	3.9	NA	NA	0.0162	NA
	Aroclor-1221	mg/kg	0.17	NA	NA	ND	NA
	Aroclor-1232	mg/kg	0.17	NA	NA	ND	NA
	Aroclor-1242	mg/kg	0.22	NA	NA	ND	NA
	Aroclor-1248	mg/kg	0.22	NA	NA	ND	NA
	Aroclor-1254	mg/kg	0.22	NA	NA	ND	NA
	Aroclor-1260	mg/kg	0.22	NA	NA	ND	NA

Notes:

Shading indicates detection above lowest soil screening level.

NSA: No Screening Level Available

ND: not detected

NA: not analyzed

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

³⁾: PCB by method EPA 8082

Table 6: Results Hydrocarbon Analysis - Washed Fine Gravel (2.0 - 12.5 mm)

Parameter	Units	Washed Fine Gravel Fraction 2.0 - 12.5 mm (Sample"D")					
		Composite 1	Composite 2	Composite 3	Average Composites #1, #2 and #3	TS2U	
HYDROCARBON ¹⁾							
	Diesel Range Hydrocarbons	mg/kg	470	117	50	212	5,450
	Heavy Oil Range Hydrocarbons	mg/kg	371	231	109	237	7,210

Notes:

¹⁾: Hydrocarbon by method NWTPH-Dx

Table 7: Analytical Results Soil Washing Tests - Composite 1

Parameter	Units	Untreated Soil	Sand After Separation & Washing									
		Soil Fraction < 12.5 mm Sample "C1-B"	Sand after Hydraulic Separation Sample "C1-F"		Sand after Water Only Washing Sample "C1-WS1"		Sand after Surfactant Washing Sample "C1-WS2"		Sand after Surfactant Washing at Elevated Temperature (130 F) Sample "C1-WS3"		Sand after Surfactant Washing & Flotation Sample "C1-WS4"	
		Contaminant Concentration	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)
HYDROCARBON¹⁾												
Diesel Range Hydrocarbons	mg/kg	7,440	1,290	83%	513	93%	274	96%	260	97%	339	95%
Heavy Oil Range Hydrocarbons	mg/kg	4,530	803	82%	359	92%	184	96%	175	96%	226	95%
POLYCYCLIC AROMATIC HYDROCARBON (PAH)²⁾												
1-Methylnaphthalene	mg/kg	ND	ND	-	NA	NA	NA	NA	NA	NA	ND	-
2-Methylnaphthalene	mg/kg	0.121	0.096	21%	NA	NA	NA	NA	NA	NA	0.006	95%
Acenaphthene	mg/kg	1.49	ND	-	NA	NA	NA	NA	NA	NA	ND	-
Acenaphthylene	mg/kg	ND	ND	-	NA	NA	NA	NA	NA	NA	ND	-
Anthracene	mg/kg	1.07	0.23	79%	NA	NA	NA	NA	NA	NA	0.04	96%
Benzo (a) anthracene	mg/kg	0.220	0.056	74%	NA	NA	NA	NA	NA	NA	0.007	97%
Benzo (a) pyrene	mg/kg	0.147	ND	-	NA	NA	NA	NA	NA	NA	ND	-
Benzo (b) fluoranthene	mg/kg	0.142	ND	-	NA	NA	NA	NA	NA	NA	0.004	97%
Benzo (ghi) perylene	mg/kg	0.152	0.045	70%	NA	NA	NA	NA	NA	NA	ND	-
Benzo (k) fluoranthene	mg/kg	ND	ND	-	NA	NA	NA	NA	NA	NA	ND	-
Chrysene	mg/kg	0.325	0.085	74%	NA	NA	NA	NA	NA	NA	0.012	96%
Dibenzo (a,h) anthracene	mg/kg	0.136	0.059	56%	NA	NA	NA	NA	NA	NA	ND	-
Fluoranthene	mg/kg	0.435	0.116	73%	NA	NA	NA	NA	NA	NA	0.016	96%
Fluorene	mg/kg	0.535	ND	-	NA	NA	NA	NA	NA	NA	0.010	98%
Indeno (1,2,3-cd) pyrene	mg/kg	0.142	0.056	60%	NA	NA	NA	NA	NA	NA	ND	-
Naphthalene	mg/kg	0.278	ND	-	NA	NA	NA	NA	NA	NA	ND	-
Phenanthrene	mg/kg	0.666	0.138	79%	NA	NA	NA	NA	NA	NA	0.022	97%
Pyrene	mg/kg	0.985	0.398	60%	NA	NA	NA	NA	NA	NA	0.055	94%

Notes:

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

ND: not detected

NA: not analyzed

Table 8: Analytical Results Soil Washing Tests - Composite 2

Parameter	Units	Untreated Soil	Sand After Separation & Washing											
		Soil Fraction < 12.5 mm Sample "C2-B"	Sand after Hydraulic Separation Sample "C2-F"		Sand after Water Only Washing Sample "C2-WS1"		Sand after Surfactant Washing Sample "C2-WS2"		Sand after Surfactant Washing at Elevated Temperature (130 F) Sample "C2-WS3"		Sand after Surfactant Washing & Flotation Sample "C2-WS4"		Sand after Surfactant Washing & Flotation at Elevated Temperature (130 F) Sample "C2-WS5"	
		Contaminant Concentration	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)
HYDROCARBON ¹⁾														
Diesel Range Hydrocarbons	mg/kg	1,440	116	92%	37	97%	43	97%	23	98%	34	98%	37	97%
Heavy Oil Range Hydrocarbons	mg/kg	1,040	105	90%	42	96%	43	96%	ND	-	31	97%	ND	-
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾														
1-Methylnaphthalene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
2-Methylnaphthalene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Acenaphthene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Acenaphthylene	mg/kg	0.0803	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Anthracene	mg/kg	0.522	0.0583	89%	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (a) anthracene	mg/kg	0.110	0.0181	84%	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (a) pyrene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (b) fluoranthene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (ghi) perylene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (k) fluoranthene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Chrysene	mg/kg	0.171	0.0347	80%	NA	-	NA	-	NA	-	ND	-	ND	-
Dibenzo (a,h) anthracene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Fluoranthene	mg/kg	0.156	0.0278	82%	NA	-	NA	-	NA	-	ND	-	ND	-
Fluorene	mg/kg	0.346	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Indeno (1,2,3-cd) pyrene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Naphthalene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Phenanthrene	mg/kg	0.361	0.0472	87%	NA	-	NA	-	NA	-	ND	-	ND	-
Pyrene	mg/kg	0.401	0.131	67%	NA	-	NA	-	NA	-	0.00445	99%	ND	-

Notes:

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

ND: not detected

NA: not analyzed

Table 9: Analytical Results Soil Washing Tests - Composite 3

Parameter	Units	Untreated Soil	Sand After Separation & Washing									
		Soil Fraction < 12.5 mm Sample "C3-B"	Sand after Hydraulic Separation Sample "C3-F"		Sand after Water Only Washing Sample "C3-WS1"		Sand after Surfactant Washing Sample "C3-WS2"		Sand after Surfactant Washing at Elevated Temperature (130 F) Sample "C3-WS3"		Sand after Surfactant Washing & Flotation Sample "C3-WS4"	
		Contaminant Concentration	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)
HYDROCARBON ¹⁾												
Diesel Range Hydrocarbons	mg/kg	2,400	102	96%	20.0	99%	27.7	99%	17.2	99%	13	99%
Heavy Oil Range Hydrocarbons	mg/kg	2,670	189	93%	35.4	99%	45.8	98%	ND	-	ND	-
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾												
1-Methylnaphthalene	mg/kg	2.14	0.00724	100%	NA	-	NA	-	NA	-	0.00483	100%
2-Methylnaphthalene	mg/kg	0.124	0.00529	96%	NA	-	NA	-	NA	-	0.00483	96%
Acenaphthene	mg/kg	0.671	0.00807	99%	NA	-	NA	-	NA	-	ND	-
Acenaphthylene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Anthracene	mg/kg	0.472	0.00473	99%	NA	-	NA	-	NA	-	ND	-
Benzo (a) anthracene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Benzo (a) pyrene	mg/kg	0.112	ND	-	NA	-	NA	-	NA	-	ND	-
Benzo (b) fluoranthene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Benzo (ghi) perylene	mg/kg	0.124	ND	-	NA	-	NA	-	NA	-	ND	-
Benzo (k) fluoranthene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Chrysene	mg/kg	0.224	0.00529	98%	NA	-	NA	-	NA	-	ND	-
Dibenzo (a,h) anthracene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Fluoranthene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Fluorene	mg/kg	0.845	ND	-	NA	-	NA	-	NA	-	ND	-
Indeno (1,2,3-cd) pyrene	mg/kg	0.124	ND	-	NA	-	NA	-	NA	-	ND	-
Naphthalene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-
Phenanthrene	mg/kg	1.06	0.00752	99%	NA	-	NA	-	NA	-	0.00456	100%
Pyrene	mg/kg	0.348	0.01090	97%	NA	-	NA	-	NA	-	ND	-
POLYCHLORINATED BI-PHENYLS (PCB) ³⁾												
Aroclor-1016	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	ND	-
Aroclor-1221	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	ND	-
Aroclor-1232	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	ND	-
Aroclor-1242	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	ND	-
Aroclor-1248	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	ND	-
Aroclor-1254	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	ND	-
Aroclor-1260	mg/kg	0.107	NA	-	NA	-	NA	-	NA	-	0.0285	73%

Notes:

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

ND: not detected

NA: not analyzed

Table 10: Analytical Results Soil Washing Tests - Sample TS2U

Parameter	Units	Untreated Soil	Sand After Separation & Washing											
		Soil Fraction < 12.5 mm Sample "TS2U-B"	Sand after Hydraulic Separation Sample "TS2U-F"		Sand after Water Only Washing Sample "TS2U-WS1"		Sand after Surfactant Washing Sample "TS2U-WS2"		Sand after Surfactant Washing at Elevated Temperature (130 F) Sample "TS2U-WS3"		Sand after Surfactant Washing & Flotation Sample "TS2U-WS4"		Sand after Surfactant Washing & Flotation at Elevated Temperature (130 F) Sample "TS2U-WS5"	
		Contaminant Concentration	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)	Contaminant Concentration	Removal Efficiency (%)
HYDROCARBON ¹⁾														
Diesel Range Hydrocarbons	mg/kg	10,700	121 ³⁾	Note ³⁾	3,600	66%	3,670	66%	3,280	69%	2,470	77%	2,450	77%
Heavy Oil Range Hydrocarbons	mg/kg	13,000	198 ³⁾	Note ³⁾	4,660	64%	4,470	66%	4,000	69%	3,040	77%	2,820	78%
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾														
1-Methylnaphthalene	mg/kg	ND	0.368	-	NA	-	NA	-	NA	-	ND	-	0.100	-
2-Methylnaphthalene	mg/kg	1.20	0.958	20%	NA	-	NA	-	NA	-	0.230	81%	0.254	79%
Acenaphthene	mg/kg	0.711	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Acenaphthylene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Anthracene	mg/kg	1.47	0.402	73%	NA	-	NA	-	NA	-	0.296	80%	0.208	86%
Benzo (a) anthracene	mg/kg	0.442	0.249	44%	NA	-	NA	-	NA	-	ND	-	0.116	-
Benzo (a) pyrene	mg/kg	0.245	0.136	44%	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (b) fluoranthene	mg/kg	0.540	0.204	62%	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (ghi) perylene	mg/kg	0.270	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Benzo (k) fluoranthene	mg/kg	ND	0.153	-	NA	-	NA	-	NA	-	ND	-	ND	-
Chrysene	mg/kg	0.662	0.346	48%	NA	-	NA	-	NA	-	0.214	68%	0.154	77%
Dibenzo (a,h) anthracene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	ND	-
Fluoranthene	mg/kg	1.69	0.652	61%	NA	-	NA	-	NA	-	0.428	75%	0.316	81%
Fluorene	mg/kg	ND	ND	-	NA	-	NA	-	NA	-	ND	-	0.100	-
Indeno (1,2,3-cd) pyrene	mg/kg	ND	0.0737	-	NA	-	NA	-	NA	-	ND	-	ND	-
Naphthalene	mg/kg	0.613	0.340	45%	NA	-	NA	-	NA	-	ND	-	0.108	82%
Phenanthrene	mg/kg	1.05	0.539	49%	NA	-	NA	-	NA	-	0.312	70%	0.216	79%
Pyrene	mg/kg	4.95	2.70	45%	NA	-	NA	-	NA	-	1.12	77%	0.887	82%
POLYCHLORINATED BI-PHENYLS (PCB) ³⁾														
Aroclor-1016	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Aroclor-1221	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Aroclor-1232	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Aroclor-1242	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Aroclor-1248	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Aroclor-1254	mg/kg	ND	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Aroclor-1260	mg/kg	0.313	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-

Notes:

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

³⁾: Analytical results suspect, as they are not consistent with other data

ND: not detected

NA: not analyzed

Table 11: Comparison Soil Washing Results for all Samples

Parameter	Units	Soil Screening Level (mg/kg)	Soil Fraction < 12.5 mm Before Washing (Sample "B")					Sand After Surfactant Washing					Contaminant Removal Efficiency (%)				
			C1	C2	C3	Average Composites # 1, #2, #3	Sample TS2U	C1	C2	C3	Average Composites # 1, #2, #3	Sample TS2U	C1	C2	C3	Average Composites # 1, #2, #3	Sample TS2U
HYDROCARBON ¹⁾																	
Diesel Range Hydrocarbons	mg/kg	NSA	7,440	1,440	2,400	3,760	10,700	274	43	28	115	3,280	96%	97%	99%	97%	69%
Heavy Oil Range Hydrocarbons	mg/kg	NSA	4,530	1,040	2,670	2,747	13,000	184	43	46	91	4,000	96%	96%	-	96%	69%
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾																	
1-Methylnaphthalene	mg/kg	22	ND	ND	2.14	2.14	ND	ND	ND	0.00483	0.00483	ND	-	-	100%	100%	-
2-Methylnaphthalene	mg/kg	310	0.121	ND	0.124	0.123	1.20	0.0063	ND	0.00483	0.00556	0.230	95%	-	96%	95%	81%
Acenaphthene	mg/kg	52.3	1.49	ND	0.671	1.08	0.711	ND	ND	ND	ND	ND	-	-	-	-	-
Acenaphthylene	mg/kg	78	ND	0.0803	ND	0.0803	ND	ND	ND	ND	ND	ND	-	-	-	-	-
Anthracene	mg/kg	1040	1.07	0.522	0.472	0.688	1.47	0.0401	ND	ND	0.04010	0.296	96%	-	-	96%	80%
Benzo (a) anthracene	mg/kg	0.15	0.220	0.110	ND	0.165	0.442	0.0071	ND	ND	0.00710	ND	97%	-	-	97%	-
Benzo (a) pyrene	mg/kg	0.02	0.147	ND	0.112	<0.086	0.245	ND	ND	ND	ND	ND	-	-	-	-	-
Benzo (b) fluoranthene	mg/kg	0.15	0.142	ND	ND	0.142	0.540	0.0044	ND	ND	0.00437	ND	97%	-	-	97%	-
Benzo (ghi) perylene	mg/kg	1178	0.152	ND	0.124	0.138	0.270	ND	ND	ND	ND	ND	-	-	-	-	-
Benzo (k) fluoranthene	mg/kg	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-
Chrysene	mg/kg	15	0.325	0.171	0.224	0.240	0.662	0.0120	ND	ND	0.01200	0.214	96%	-	-	96%	68%
Dibenzo (a,h) anthracene	mg/kg	0.02	0.136	ND	ND	0.045	ND	ND	ND	ND	ND	ND	-	-	-	-	-
Fluoranthene	mg/kg	364	0.435	0.156	ND	0.296	1.69	0.0161	ND	ND	0.01610	0.428	96%	-	-	96%	75%
Fluorene	mg/kg	54.8	0.535	0.346	0.845	0.575	ND	0.0104	ND	ND	0.01040	ND	98%	-	-	98%	-
Indeno (1,2,3-cd) pyrene	mg/kg	0.15	0.142	ND	0.124	0.133	ND	ND	ND	ND	ND	ND	-	-	-	-	-
Naphthalene	mg/kg	0.078	0.278	ND	ND	0.093	0.613	ND	ND	ND	ND	ND	-	-	-	-	-
Phenanthrene	mg/kg	79	0.666	0.361	1.06	0.696	1.05	0.0218	ND	0.00456	0.01318	0.312	97%	-	100%	98%	70%
Pyrene	mg/kg	359	0.985	0.401	0.348	0.578	4.95	0.0551	0.00445	ND	0.02978	1.12	94%	99%	-	97%	77%

Notes:

Shading indicates detection above lowest soil screening level.

NSA: No Screening Level Available

ND: not detected

NA: not analyzed

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

Table 12: Results Hydrocarbon and PAH analysis for Simulated Filter Cake

Table 12: Results Hydrocarbon and PAH analysis for Simulated Filter Cake							
Parameter	Units	Soil Screening Level (mg/kg)	Fines Fraction After Hydraulic Separation - Simulated Filter Cake (Sample "E")				
			Composite 1	Composite 2	Composite 3	Sample TS2U	
HYDROCARBON ¹⁾							
	Diesel Range Hydrocarbons	mg/kg	NSA	23,800	19,400	26,500	22,600
	Heavy Oil Range Hydrocarbons	mg/kg	NSA	15,100	14,200	27,200	28,200
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ²⁾							
	1-Methylnaphthalene	mg/kg	22	ND	ND	2.00	0.675
	2-Methylnaphthalene	mg/kg	310	0.225	ND	0.638	1.74
	Acenaphthene	mg/kg	52.3	ND	ND	7.54	ND
	Acenaphthylene	mg/kg	78	ND	1.18	ND	ND
	Anthracene	mg/kg	1040	1.44	0.775	2.86	1.74
	Benzo (a) anthracene	mg/kg	0.15	1.20	0.541	0.555	0.675
	Benzo (a) pyrene	mg/kg	0.02	0.356	0.244	ND	ND
	Benzo (b) fluoranthene	mg/kg	0.15	0.833	0.414	ND	ND
	Benzo (ghi) perylene	mg/kg	1178	0.375	0.223	0.361	ND
	Benzo (k) fluoranthene	mg/kg	1.5	ND	ND	ND	ND
	Chrysene	mg/kg	15	1.86	0.923	1.41	1.11
	Dibenzo (a,h) anthracene	mg/kg	0.02	0.515	0.180	ND	ND
	Fluoranthene	mg/kg	364	0.637	0.414	0.64	1.64
	Fluorene	mg/kg	54.8	ND	1.06	3.13	ND
	Indeno (1,2,3-cd) pyrene	mg/kg	0.15	0.309	0.212	ND	ND
	Naphthalene	mg/kg	0.078	ND	ND	1.19	ND
	Phenanthrene	mg/kg	79	1.19	1.81	3.72	1.69
	Pyrene	mg/kg	359	13.0	5.34	2.69	7.42

Notes:

Shading indicates detection above lowest soil screening level.

NSA: No Screening Level Available

ND: not detected

NA: not analyzed

¹⁾: Hydrocarbon by method NWTPH-Dx

²⁾: PAH by method EPA 8270 mod.

Table 13: Analytical Results Soil Washing Wash Water

Type	Analytes ¹⁾	Screening Level (ug/L)	Wash Water after Flocculation (Sample WW) ²⁾			
			Composite #1 (ug/L)	Composite #2 (ug/L)	Composite #3 (ug/L)	Sample TS2U (ug/L)
TPH	Diesel Range Organics	NSA	4,520	4,650	2,570	15,000
	Heavy Oil Range Hydrocarbons	NSA	712	936	801	1,570
Polynuclear Aromatic Hydrocarbon (PAH)	1-Methylnaphthalene	NSA	0.71	0.88	12	1.1
	2-Methylnaphthalene	NSA	0.43	1.10	9.7	4.3
	Acenaphthene	670	0.60	0.16	1.10	ND
	Acenaphthylene	NSA	ND	ND	0.19	ND
	Anthracene	8300	0.074	ND	0.11	ND
	Benzo (a) anthracene	0.0038	0.019	0.014	0.011	ND
	Benzo (a) pyrene	0.0038	0.0073	0.0049	0.0055	ND
	Benzo (b) fluoranthene	0.0038	0.012	0.0089	0.011	ND
	Benzo (ghi) perylene	NSA	0.0045	0.0031	0.007	ND
	Benzo (k) fluoranthene	0.0038	0.0045	0.0027	ND	ND
	Chrysene	0.0038	0.044	0.031	0.040	ND
	Dibenzo (a,h) anthracene	0.0038	0.0029	0.0024	0.0022	ND
	Fluoranthene	130	0.15	ND	0.060	ND
	Fluorene	1100	0.47	0.28	1.50	ND
	Indeno (1,2,3-cd) pyrene	0.0038	0.0034	0.0021	0.0032	ND
	Naphthalene	NSA	0.75	0.26	1.90	0.31
	Phenanthrene	NSA	0.27	0.18	0.93	0.16
	Pyrene	830	0.26	0.12	0.009	0.11
Volatile Organic Compounds	1,2,4-Trimethylbenzene	NSA	0.038	0.11	ND	ND
	1,2-Dichloroethane	0.38	ND	0.035	ND	ND
	1,4-Dichlorobenzene	NSA	0.099	ND	ND	ND
	4-Isopropyltoluene	NSA	0.098	ND	0.076	ND
	Benzene	NSA	ND	0.087	0.02	0.018
	Bromoform	4.3	5.5	5.6	3.5	3.0
	Carbon tetrachloride	0.23	ND	0.023	ND	ND
	Chlorodibromomethane	0.4	0.78	1.2	0.86	0.91
	Chloroform	5.7	1.9	2.7	2.2	2.1
	Chloromethane	NSA	0.048	0.1	0.093	0.087
	Dibromomethane	NSA	0.12	0.12	0.21	0.17
	Dichlorobromomethane	0.55	0.78	1.1	0.88	0.90
	Ethylbenzene	530	ND	0.064	0.072	ND
	Isopropylbenzene	NSA	ND	0.023	0.17	ND
	Methylene Chloride	4.6	0.51	3.6	3.5	3.1
	m-Xylene & p-Xylene	NSA	0.047	0.21	0.079	0.11
	N-Propylbenzene	NSA	ND	0.033	0.33	ND
	o-Xylene	NSA	0.021	0.11	0.031	0.032
	sec-Butylbenzene	NSA	ND	0.045	0.3	ND
	tert-Butylbenzene	NSA	0.03	0.027	ND	ND
	Toluene	1,300	0.036	0.32	0.081	0.039

Notes:

Shading indicates detection above lowest screening level.

NSA: No Screening Level Available

ND: Not Detected

¹⁾: Only analytes detected are reported in this table. For complete list of analytes refer to analytical reports provided in Appendix C.

²⁾: Ratio of Wash Water to Soil 1:5

Table 13: Analytical Results Soil Washing Wash Water (continued)

Type	Analytes ¹⁾	Screening Level (ug/L)	Wash Water after Flocculation (Sample WW) ²⁾			
			Composite #1 (ug/L)	Composite #2 (ug/L)	Composite #3 (ug/L)	Sample TS2U (ug/L)
Semi-Volatile Organic Compounds	1,2-Dichlorobenzene	420	ND	ND	0.028	ND
	2-Methylphenol	NSA	0.079	ND	0.032	ND
	3 & 4 Methylphenol	NSA	ND	ND	0.051	ND
	Benzyl alcohol	NSA	ND	0.16	ND	ND
	Butyl benzyl phthalate	1,500	0.31	0.38	0.25	ND
	Diethyl phthalate	17,000	ND	0.51	0.16	ND
	Di-n-butyl phthalate	2,000	ND	0.37	0.32	ND
	Phenol	21,000	0.098	0.10	0.095	ND
Total Metals	Aluminum	NSA	2,400	1,700	940	1,000
	Arsenic	50	4.4	5.3	2.8	6.7
	Antimony	5.6	2.0	5.6	5.7	8.6
	Barium	NSA	130	94	77	180
	Beryllium	NSA	ND	ND	ND	ND
	Calcium	NSA	57,000	64,000	70,000	70,000
	Cadmium	0.6	ND	ND	ND	ND
	Chromium	74	2.5	2.8	1.7	1.8
	Cobalt	NSA	4.9	4.1	2.0	1.1
	Copper	11	13	10	8.6	18
	Iron	NSA	2,200	2,500	1,100	990
	Lead	2.5	7.2	3.9	5.1	16
	Magnesium	NSA	7,100	7,400	7,500	6,400
	Manganese	NSA	2,800	1,100	1,700	1,300
	Mercury	NSA	ND	ND	ND	ND
	Nickel	52	5.0	6.6	3.6	3.0
	Potassium	NSA	3,900	3,700	3,500	3,600
	Selenium	5	ND	ND	ND	ND
	Silver	3.4	ND	ND	ND	ND
	Sodium	NSA	46,000	45,000	38,000	38,000
	Thallium	0.24	0.47	0.74	0.45	0.38
	Vanadium	NSA	4.8	3.3	4.0	5.2
	Zinc	120	12	13	13	14

Notes:

Shading indicates detection above lowest screening level.

NSA: No Screening Level Available

ND: Not Detected

¹⁾: Only Analytes detected are reported in this table. For complete list of analytes refer to analytical reports provided in Appendix C.

²⁾: Ratio of Wash Water to Soil 1:5

Table 14: Projected Soil Washing Product “In-Out” Mass Balance on 1,000 Ton Basis

	Soil Mass including Moisture (tons)	Assumed Solids Content ¹⁾ (% by weight)	Soil Mass Dry (tons)	Mass Distribution on dry weight basis ²⁾ (%)
Contaminated Soil for Processing	1,000	93%	930	100.0%
<u>Clean Products</u>				
Washed Gravel (> 2.0 mm)	686	95%	652	70.1%
Sand (0.038-2.0 mm)	278	85%	236	25.4%
<u>Filter Cake Residue for off-site disposal</u>				
Fines Filter Cake (<0.038 mm)	83 ³⁾	50%	42	4.5%

Note:

¹⁾: Estimated values; Solids Content = 100% - moisture content

²⁾: Based on calculated average particle size distribution results for composite samples analyzed in this study

³⁾: Filter Cake quantity based on assumed 50% dry solids by weight of filter cake produced by filter press. If filter cake is spread out and allowed to dry on open air before shipment to the landfill, the total total mass of filter cake may be further reduced.

Attachment A

Treatability Study Photos

PHOTOS

- Photo 1: TS1 - Soil as Received
- Photo 2: TS1 - Soil after Decantation
- Photo 3: TS1 - Soil after Decantation (II)
- Photo 4: TS2 - Soil as Received
- Photo 5: TS2 - Soil after Decantation
- Photo 6: TS2 - Soil after Decantation (II)
- Photo 7: TS3 - Soil as Received
- Photo 8: TS3 - Soil after Decantation
- Photo 9: TS3 - Soil after Decantation (II)
- Photo 10: TS4 - Soil as Received
- Photo 11: TS4 - Soil as Received
- Photo 12: TS5 - Soil as Received
- Photo 13: TS5 - Soil as Received (II)
- Photo 14: TS6 - Soil as Received
- Photo 15: TS6 - Soil after Decantation
- Photo 16: TS6 - Soil after Decantation (II)
- Photo 17: TS2U Soil as Received
- Photo 18: TS2U Soil as Received (II)
- Photo 19: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Dry Screening - Composite 1
- Photo 20: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Washing - Composite 1
- Photo 21: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Dry Screening - Composite 2
- Photo 22: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Washing - Composite 2
- Photo 23: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Dry Screening - Composite 3
- Photo 24: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Washing - Composite 3
- Photo 25: Sample TS2U - Soil Fraction Greater than 12.5 mm ($>1/2''$) Containing
Hardened tar-like Asphaltic Material - Sample TS2U
- Photo 26: Close-up Picture of Hardened Asphaltic Material - Sample TS2U
- Photo 27: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Dry Screening - Sample TS2U
- Photo 28: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Washing - Sample TS2U
- Photo 29: Soil Particle Size Fractions less than 12.5 mm ($<1/2''$) - Composite 1
- Photo 30: Soil Particle Size Fractions less than 12.5 mm ($<1/2''$) - Composite 2
- Photo 31: Soil Particle Size Fractions less than 12.5 mm ($<1/2''$) - Composite 3
- Photo 32: Soil Particle Size Fractions less than 12.5 mm ($<1/2''$) - Sample TS2U
- Photo 33: Asphaltic Particles Soil fraction (4.75 - 12.5mm) - Sample TS2U
- Photo 34: Asphaltic Particles Soil fraction (2.0 - 4.75mm) - Sample TS2U
- Photo 35: Laboratory Flotation Machine
- Photo 36: Washing Test with Agitation only (no air)
- Photo 37: Flotation Test with Air - Composite 3
- Photo 38: Flotation Test with Air - TS2U
- Photo 39: Flotation Concentrate - Sample TS2U
- Photo 40: Flotation Concentrate consisting of Asphaltic Particles - Sample TS2U
- Photo 41: Wash Water with Fines (<0.038 mm) and Floating Product
- Photo 42: Wash Water Flocculation
- Photo 43: Fines Settling
- Photo 44: Wash Water Decantation



Photo 1: TS1 Soil as Received



Photo 2: TS1 – Soil after Decantation



Photo 3: TS1 - Soil after Decantation (II)



Photo 4: TS2 - Soil as Received



Photo 5: TS2 – Soil after Decantation



Photo 6: TS2 – Soil after Decantation (II)



Photo 7: TS3 – Soil as Received



Photo 8: TS3 – Soil after Decantation



Photo 9: TS3 – Soil after Decantation (II)



Photo 10: TS4 - Soil as Received



Photo 11: TS4 - Soil as Received (II)



Photo 12: TS5 - Soil as Received



Photo 13: TS5 - Soil as Received (II)



Photo 14: TS6 – Soil as Received



Photo 15: TS6- Soil after Decantation



Photo 16: TS6 - Soil after Decantation (II)



Photo 17: TS2U Soil as Received



Photo 18: TS2U Soil as Received



Photo 19: Soil Fraction Greater than 12.5 mm (>1/2") after Dry Screening – Composite 1



Photo 20: Soil Fraction Greater than 12.5 mm (>1/2") after Washing – Composite 1



Photo 21: Soil Fraction Greater than 12.5 mm ($>1/2"$) after Dry Screening – Composite 2



Photo 22: Soil Fraction Greater than 12.5 mm ($>1/2"$) after Washing – Composite 2



Photo 23: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Dry Screening – Composite 3



Photo 24: Soil Fraction Greater than 12.5 mm ($>1/2''$) after Washing – Composite 3



Photo 25: Soil Fraction Greater than 12.5 mm ($>1/2$ ") containing Hardened tar-like Asphaltic Material – Sample TS2U



Photo 26: Close-up Picture of Hardened Asphaltic Material – Sample TS2U



Photo 27: Soil Fraction Greater than 12.5 mm (>1/2") after Dry Screening –
Sample TS2U



Photo 28: Soil Fraction Greater than 12.5 mm (>1/2") after Washing –
Sample TS2U



Photo 29: Soil Particle Size Fractions less than 12.5 mm (<1/2") - Composite 1



Photo 30: Soil Particle Size Fractions less than 12.5 mm (<1/2") - Composite 2



Photo 31: Soil Particle Size Fractions less than 12.5 mm (<1/2") - Composite 3



Photo 32: Soil particle size fractions less than 12.5 mm (<1/2") - Sample TS2U



Photo 33: Asphaltic Particles Soil fraction (4.75 – 12.5mm) - Sample TS2U



Photo 34: Asphaltic Particles Soil fraction (2.0 – 4.75mm) - Sample TS2U



Photo 35: Laboratory Flotation Machine



Photo 36: Washing Test with Agitation only (no air)



Photo 37: Flotation Test with Air - Composite 3



Photo 38: Flotation Test with Air - TS2U



Photo 39: Flotation Concentrate – Sample TS2U



Photo 40: Flotation Concentrate consisting of Asphaltic Particles - Sample TS2U



Photo 41: Wash Water with Fines (<0.038 mm) and Floating Product



Photo 42: Wash Water Flocculation



Photo 43: Fines Settling



Photo 44: Wash Water Decantation

Attachment B

Raw Data Collection Worksheets

RAW DATA COLLECTION DATA SHEET

ART Engineering LLC

October-09

SITE: AVERY LANDING SITE, IDAHO

Dry Screening Results - Composite 1

Sample ID	Soil Fraction	Net Weight (after decantation) (kg)	Dry Solids by Weight (%)	Net Weight on dry weight basis (kg)	Mass Distribution (%)
Composite 1		58.55	92.0% ²⁾	53.86	100.0%
	> 12.5 mm	28.70	98.0% ¹⁾	28.13	52.2%
	< 12.5 mm	29.85	86.2%	25.74	47.8%
	Total	58.55		53.86	100.0%

Dry Screening Results - Composite 2

Sample ID	Soil Fraction	Net Weight (after decantation) (kg)	Dry Solids by Weight (%)	Net Weight on dry weight basis (kg)	Mass Distribution (%)
Composite 2		52.05	95.6% ²⁾	49.78	100.0%
	> 12.5 mm	26.40	98.0% ¹⁾	25.87	52.0%
	< 12.5 mm	26.70	89.5%	23.90	48.0%
	Total	53.10		49.78	100.0%

Dry Screening Results - Composite 3

Sample ID	Soil Fraction	Net Weight (after decantation) (kg)	Dry Solids by Weight (%)	Net Weight on dry weight basis (kg)	Mass Distribution (%)
Composite 3		57.95	94.2% ²⁾	54.57	100.0%
	> 12.5 mm	35.00	98.0% ¹⁾	34.30	60.4%
	< 12.5 mm	22.95	88.3%	20.27	39.6%
	Total	57.95		54.57	100.0%

Dry Screening Results - Sample TS2U

Sample ID	Soil Fraction	Net Weight (after decantation) (kg)	Dry Solids by Weight (%)	Net Weight on dry weight basis (kg)	Mass Distribution (%)
TS2-U		18.65	94.3% ²⁾	17.59	100.0%
	> 12.5 mm	6.90	98.0% ¹⁾	6.76	37.0%
	< 12.5 mm	11.75	92.2%	10.83	63.0%
	Total	18.65		17.59	100.0%

Notes:

¹⁾: Estimated Value

²⁾: Backcalculated Moisture Content

RAW DATA COLLECTION DATA SHEET

SITE: AVERY LANDING SITE, IDAHO

ART Engineering LLC

October-09

Results Gravel Washing (>12.5 mm)

Sample ID	Mass		Mass (%)
	Mass Gravel before Wet Washing (g)	Mass Adhering Soil - 12.5 mm (dry) (g)	Adhering Soil - 12.5 mm (dry) (%)
Composite #1	1022	59.8	5.8%
Composite #2	1035	58.9	5.7%
Composite #3	1044	78.9	7.6%
TS2-U	1016	64.4	6.3%

RAW DATA COLLECTION DATA SHEET

ART Engineering LLC

October-09

SITE: AVERY LANDING SITE, IDAHO

Fraction	Composite#1		Composite#2		Composite#3		TS2-U	
	Net (g)	Distribution (%)	Net (g)	Distribution (%)	Net (g)	Distribution (%)	Net (g)	Distribution (%)
4.75-12.5 mm	52.43	18.4%	92.66	30.6%	87.55	30.7%	69.15	25.3%
2.0-4.75 mm	43.78	15.4%	57.55	19.0%	62.17	21.8%	40.00	14.6%
1.0-2.0 mm	33.09	11.6%	34.96	11.5%	35.07	12.3%	30.13	11.0%
0.5-1.0 mm	29.58	10.4%	37.24	12.3%	33.35	11.7%	36.86	13.5%
0.25-0.5 mm	20.76	7.3%	26.26	8.7%	14.58	5.1%	34.71	12.7%
0.125-0.25 mm	24.06	8.4%	16.27	5.4%	14.61	5.1%	18.53	6.8%
0.075-0.125mm	18.38	6.5%	7.85	2.6%	7.73	2.7%	11.38	4.2%
0.038-0.075 mm	23.96	8.4%	10.86	3.6%	10.65	3.7%	12.34	4.5%
<0.038 mm	38.74	13.6%	19.22	6.3%	19.07	6.7%	19.97	7.3%
Total	284.78	100.0%	302.87	100.0%	284.78	100.0%	273.07	100.0%
Sample Used for Particle Size Analysis (wet) - gram	341		345		327		309	

Moisture Anal.

Tare	2.18	2.18	2.20	2.18
+sample wet	85.31	82.75	93.83	57.09
+sample dry	73.86	74.31	83.12	52.79
% solids	86.2%	89.5%	88.3%	92.2%

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

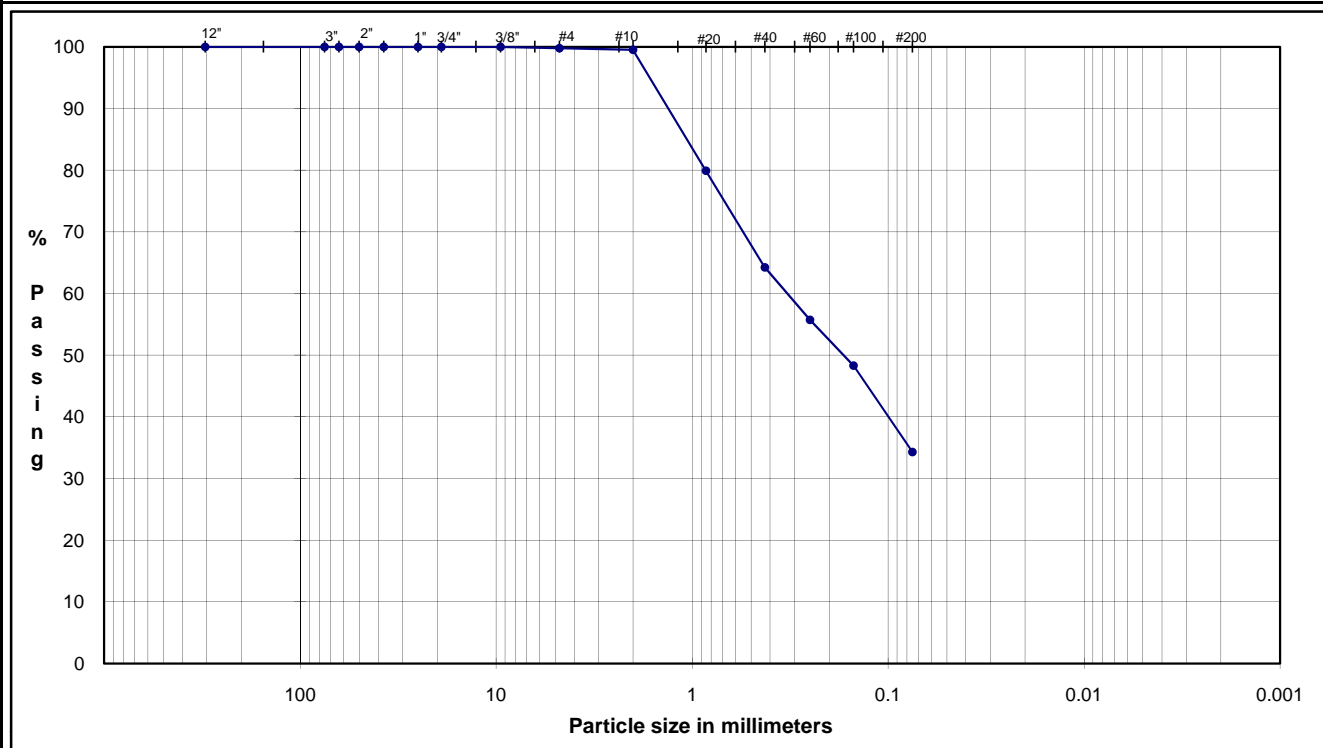
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-B 0

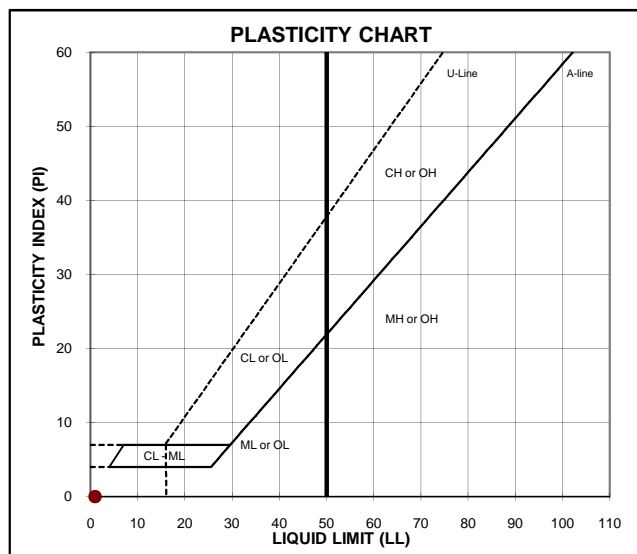
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size			Particle Size	
	(mm)	% Passing	Classification	Percentage	
	12.0"	304.8	100.0	Cobbles	0.00
	3.0"	75.0	100.0		
	2.5"	63.5	100.0		
	2.0"	50.0	100.0		
	1.5"	37.5	100.0		
	1.0"	25.0	100.0	Coarse Gravel	0.00
	0.75"	19.0	100.0		
	0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.19	
#4	4.8	99.8			
#10	2.00	99.5	Coarse Sand	0.29	
#20	0.85	79.9	Medium Sand	35.25	
#40	0.43	64.3			
#60	0.25	55.7			
#100	0.15	48.3	Fine Sand	29.97	
#200	0.075	34.3			
			Fines	34.29	



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
18.5				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND and SILT
trace f gravel

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

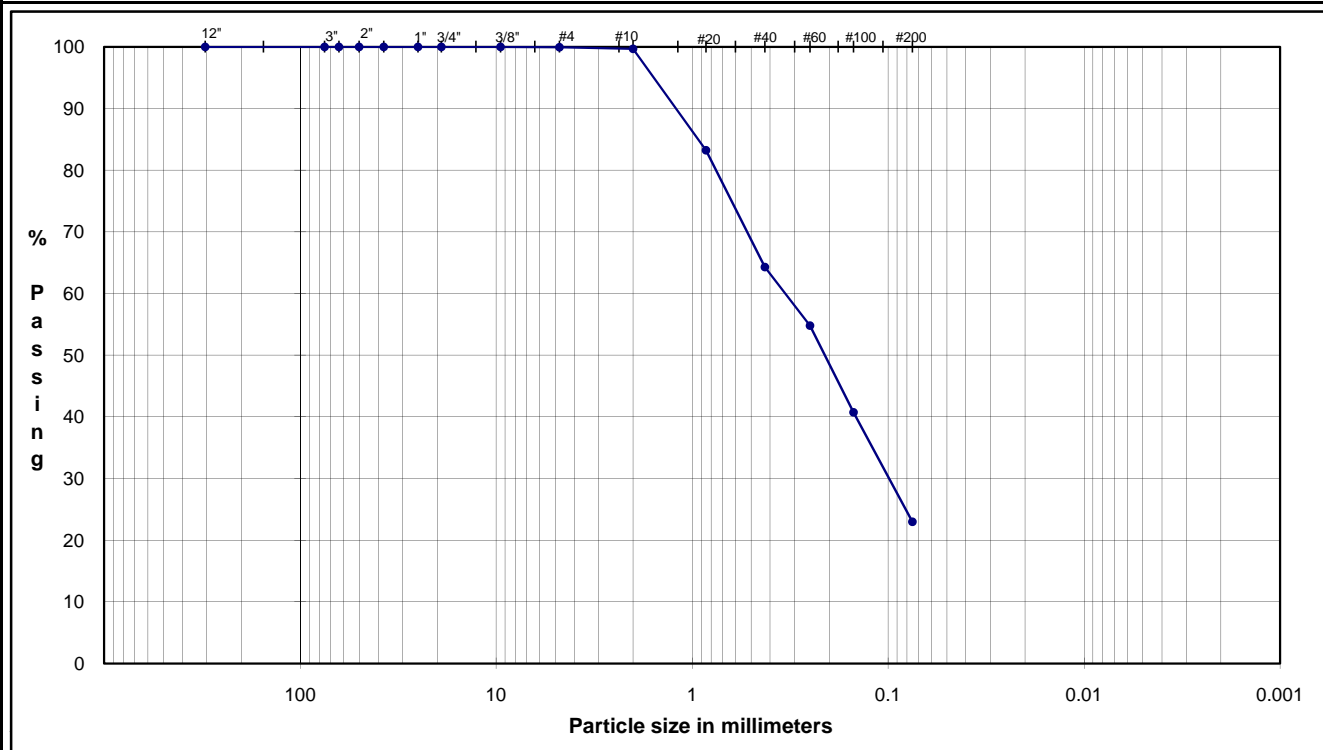
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-C 0

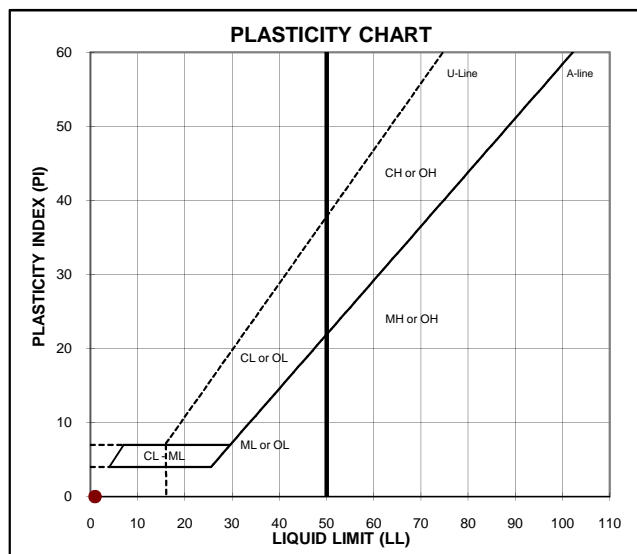
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	99.9	
	#10	2.00	99.7	Coarse Sand
	#20	0.85	83.2	
	#40	0.43	64.3	Medium Sand
	#60	0.25	54.8	
	#100	0.15	40.7	Fine Sand
	#200	0.075	23.0	
Fines				22.99



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
22.0				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND

some silt, trace f gravel

USCS: SM

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

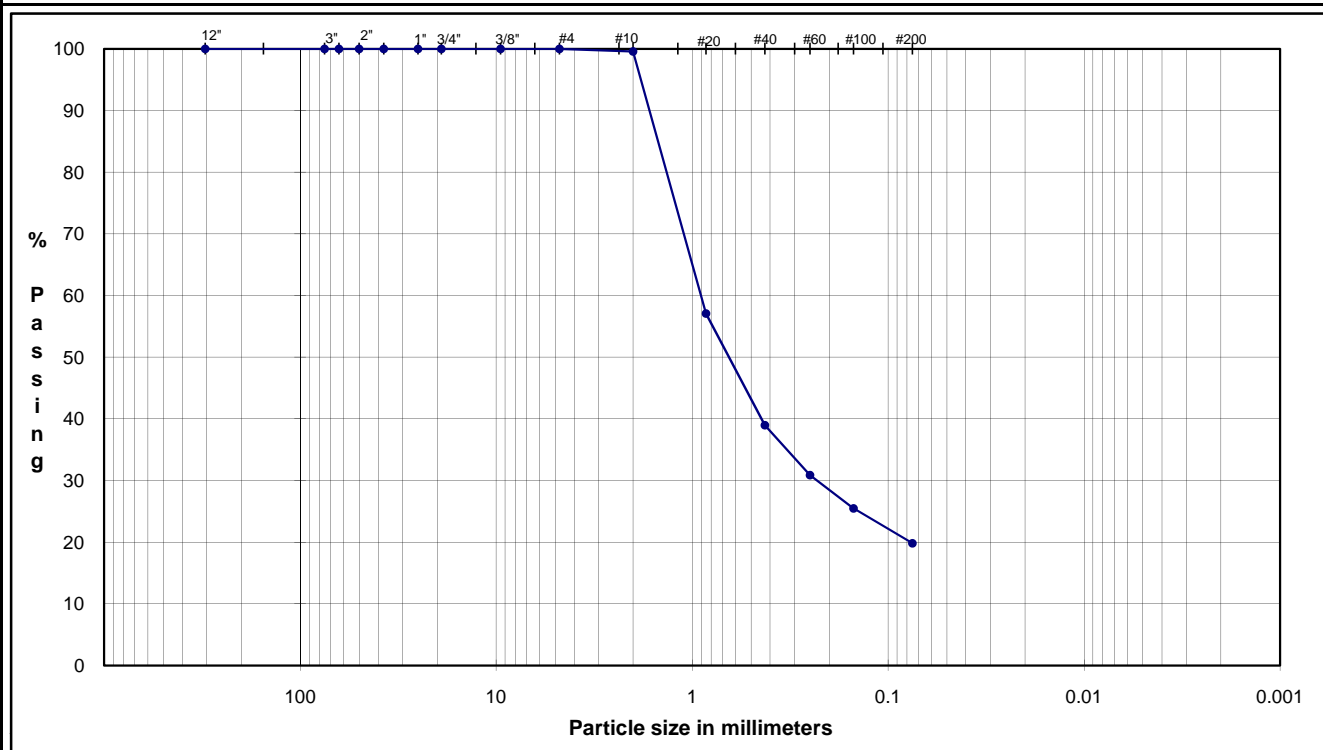
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-D 0

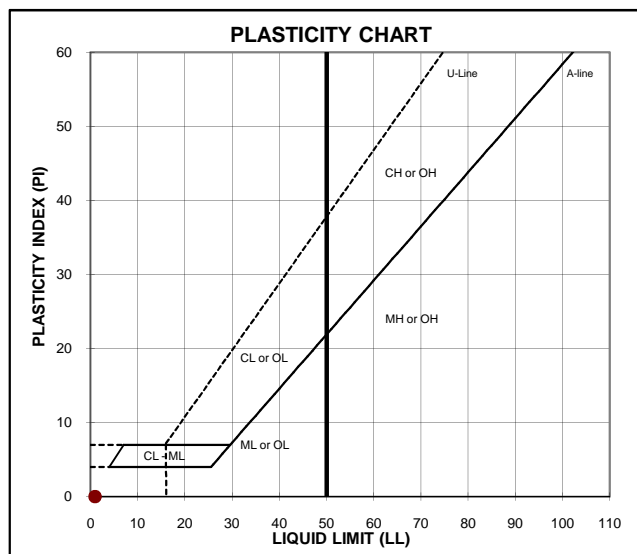
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size			Particle Size	
	(mm)	% Passing	Classification	Percentage	
	12.0"	304.8	100.0	Cobbles	0.00
	3.0"	75.0	100.0		
	2.5"	63.5	100.0		
	2.0"	50.0	100.0		
	1.5"	37.5	100.0		
	1.0"	25.0	100.0	Coarse Gravel	0.00
	0.75"	19.0	100.0		
	0.50"	12.7	100.0		
	0.375"	9.5	100.0	Fine Gravel	0.00
	#4	4.8	100.0		
	#10	2.00	99.6	Coarse Sand	0.42
	#20	0.85	57.1	Medium Sand	60.63
	#40	0.43	38.9		
#60	0.25	30.8			
#100	0.15	25.5	Fine Sand	19.16	
#200	0.075	19.8			
Fines				19.79	



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
5.4				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

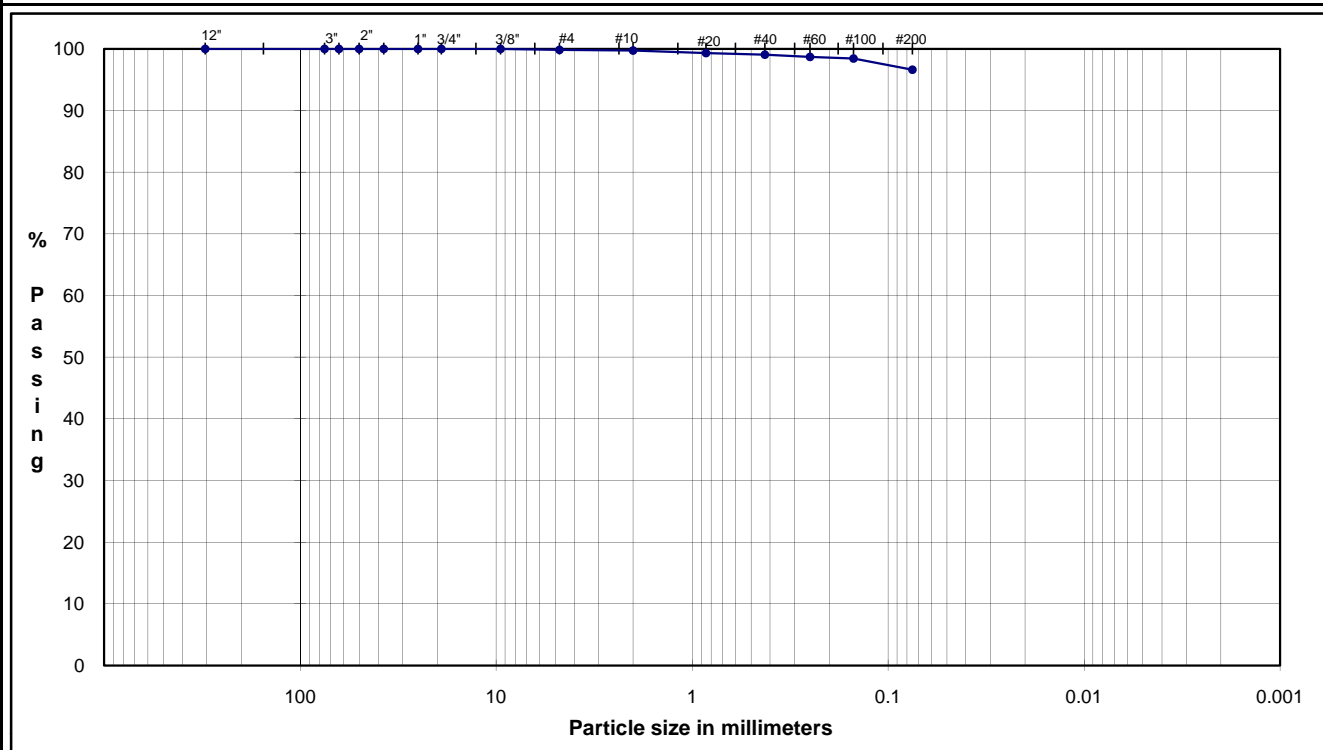
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-E 0

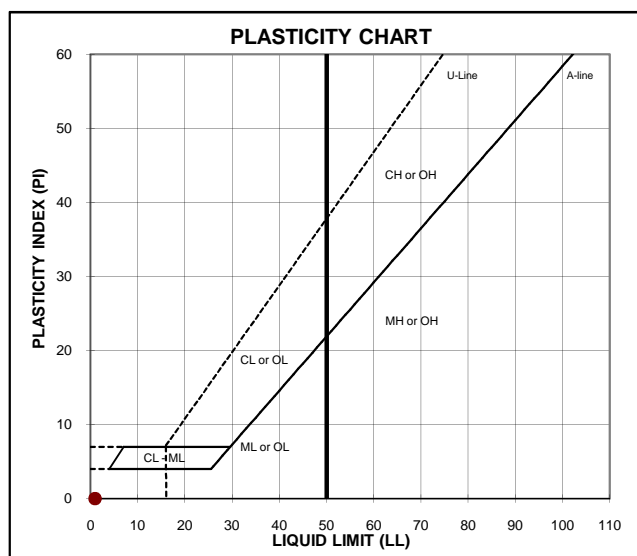
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	99.9	
	#10	2.00	99.7	Coarse Sand
	#20	0.85	99.4	
	#40	0.43	99.1	Medium Sand
	#60	0.25	98.7	
	#100	0.15	98.4	Fine Sand
	#200	0.075	96.6	
	Fines			96.64



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
80.6				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: SILT

trace c-f sand, trace f gravel

USCS: 0

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

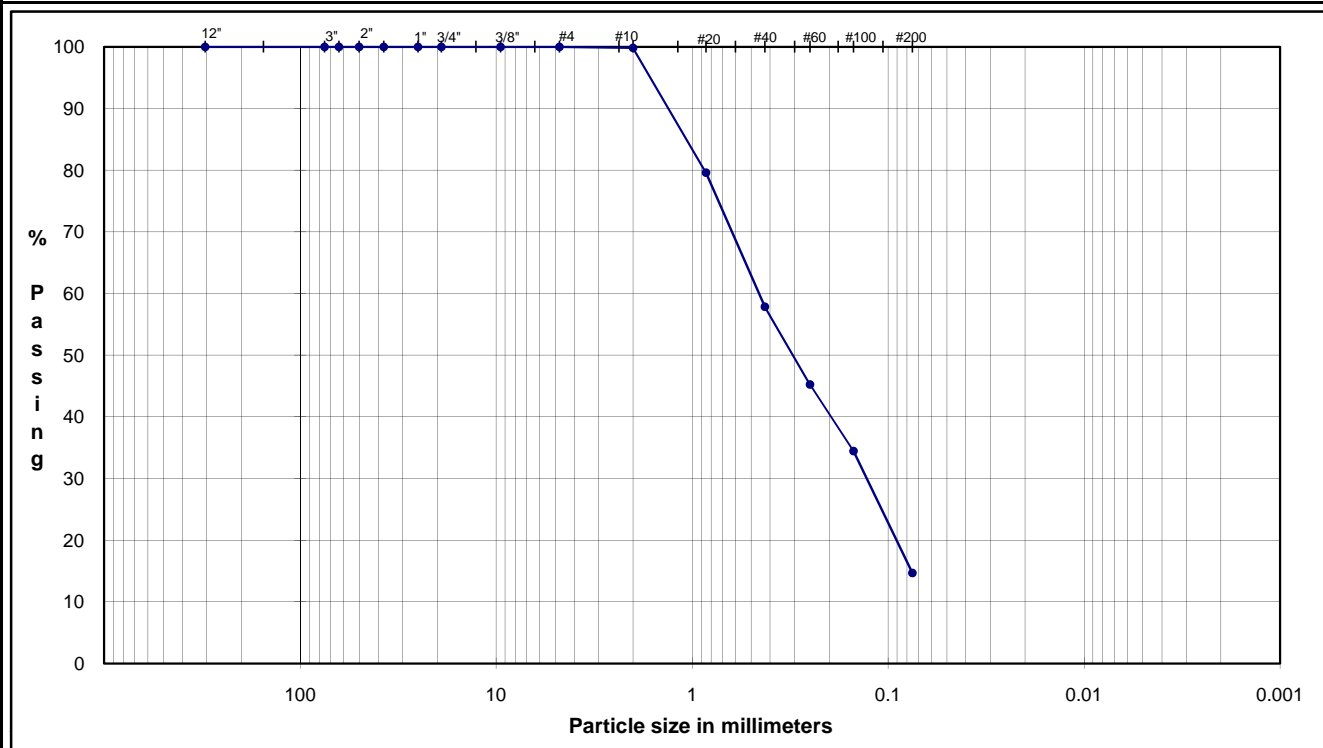
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-F 0

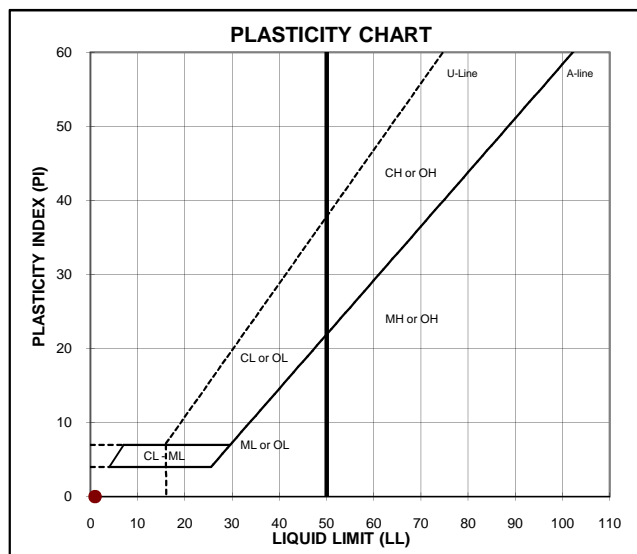
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
12.0"	304.8	100.0	Cobbles	0.00
3.0"	75.0	100.0		
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0	Coarse Gravel	0.00
0.75"	19.0	100.0		
0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00
#4	4.8	100.0		
#10	2.00	99.8	Coarse Sand	0.17
#20	0.85	79.6	Medium Sand	41.99
#40	0.43	57.8		
#60	0.25	45.3		
#100	0.15	34.5	Fine Sand	43.17
#200	0.075	14.7		
			Fines	14.67



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
24.9				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

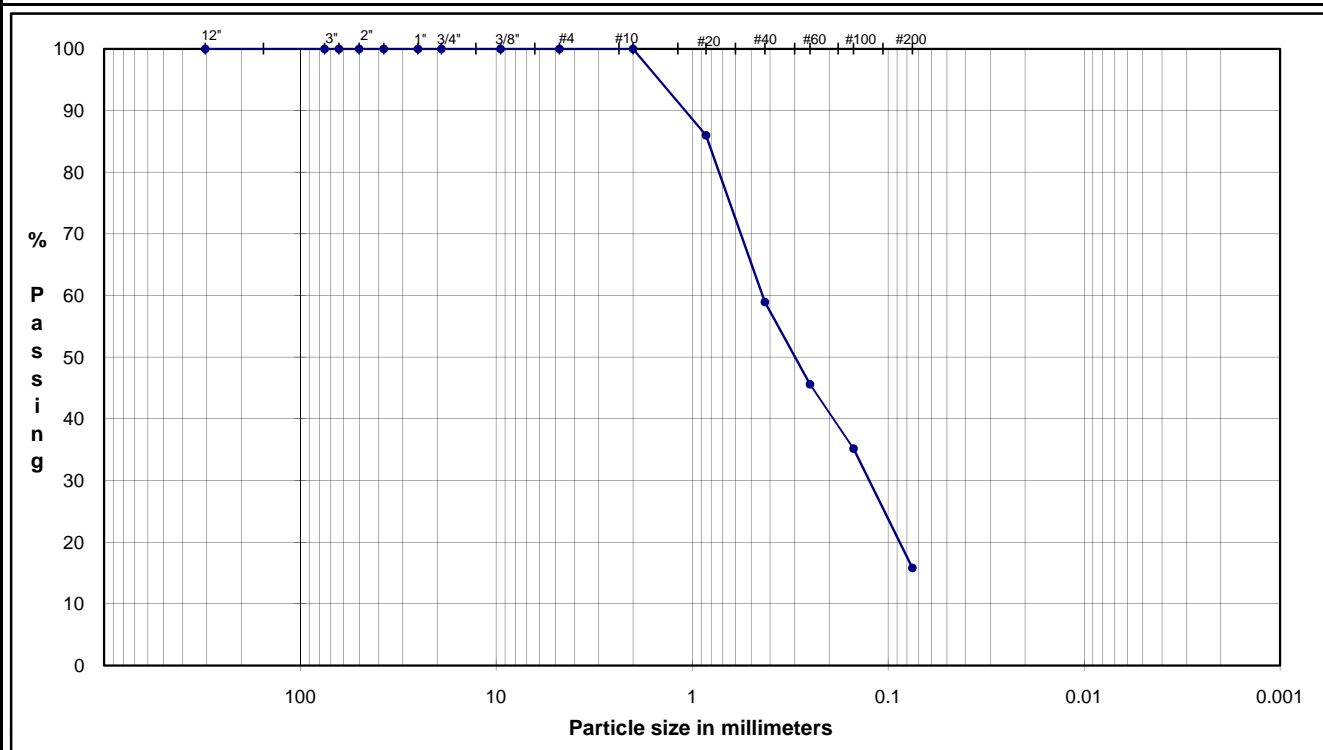
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1WS-1 0

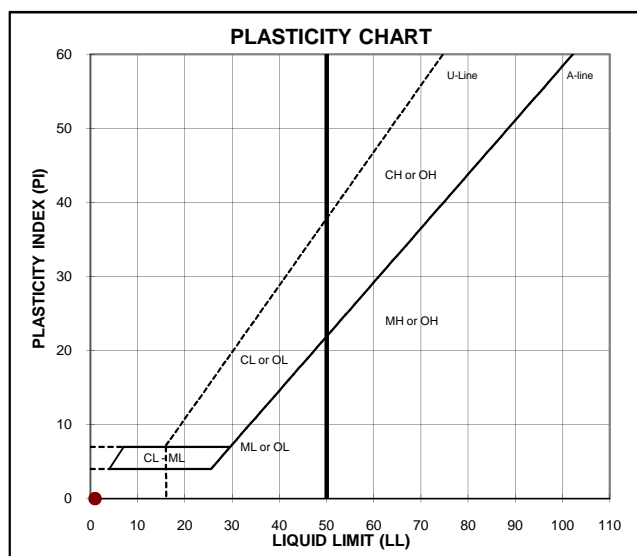
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	
	#20	0.85	86.0	Medium Sand
	#40	0.43	58.9	
	#60	0.25	45.6	
	#100	0.15	35.2	Fine Sand
	#200	0.075	15.8	
Fines				15.80



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
23.4				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

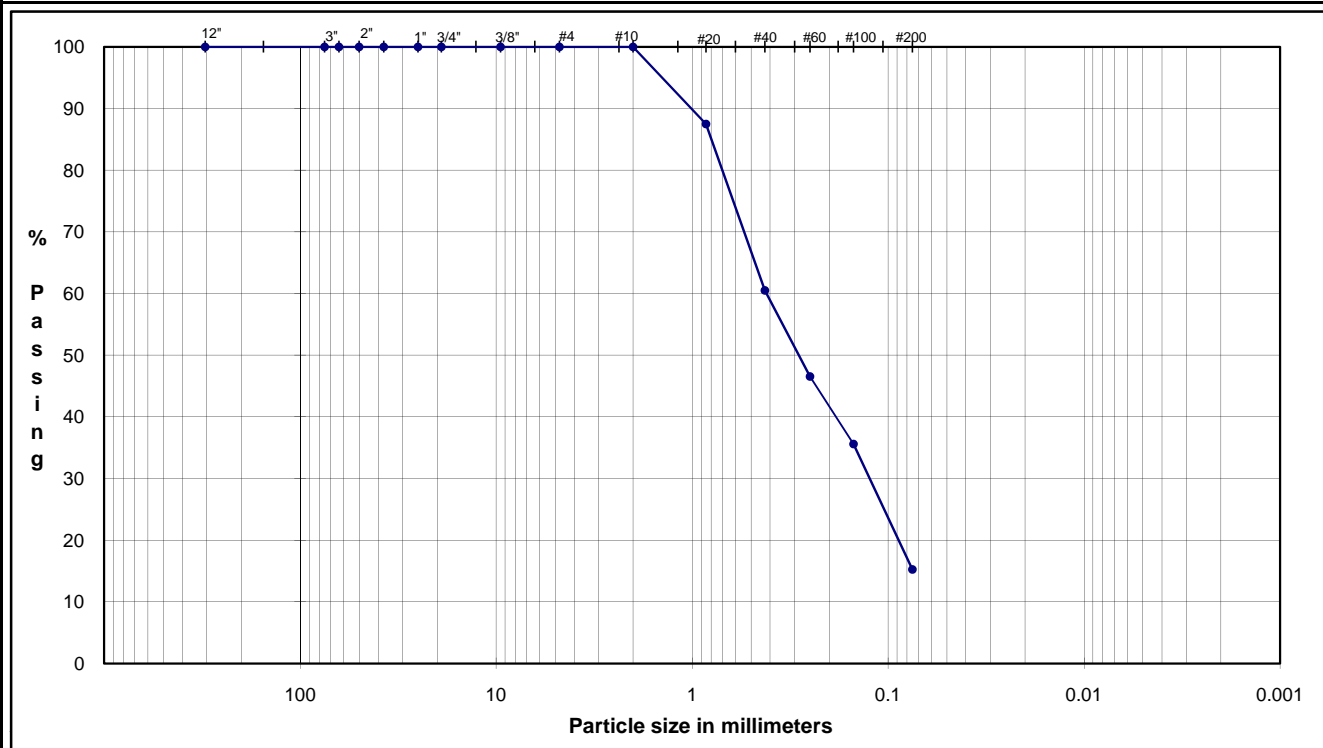
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-WS2 0

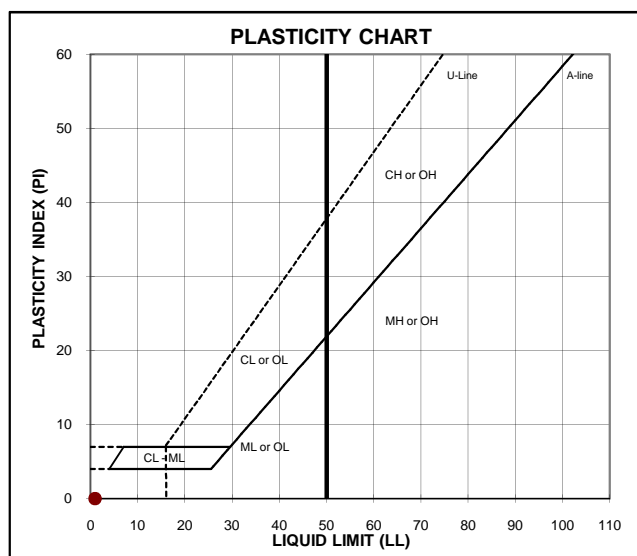
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	
	#20	0.85	87.5	
	#40	0.43	60.5	Medium Sand
	#60	0.25	46.5	
	#100	0.15	35.6	
	#200	0.075	15.3	Fine Sand
Fines				15.26



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
20.3				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

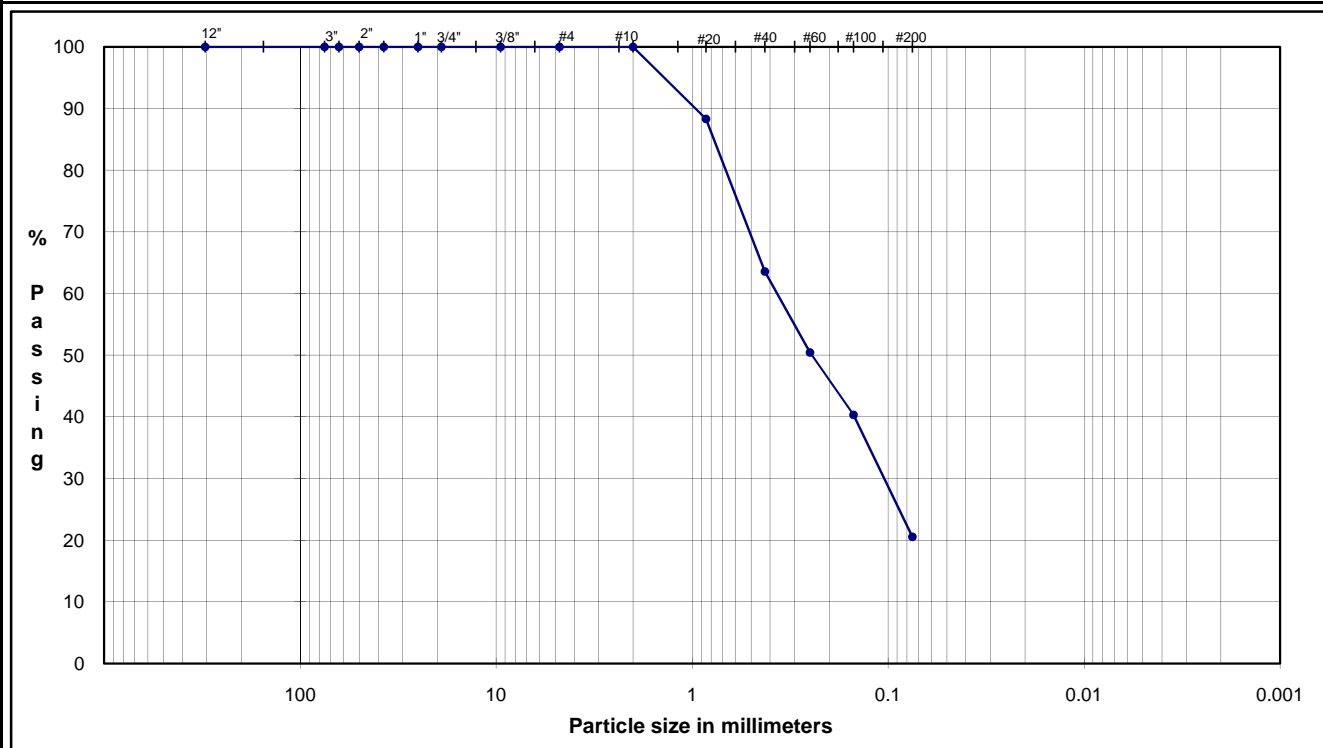
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-WS3 0

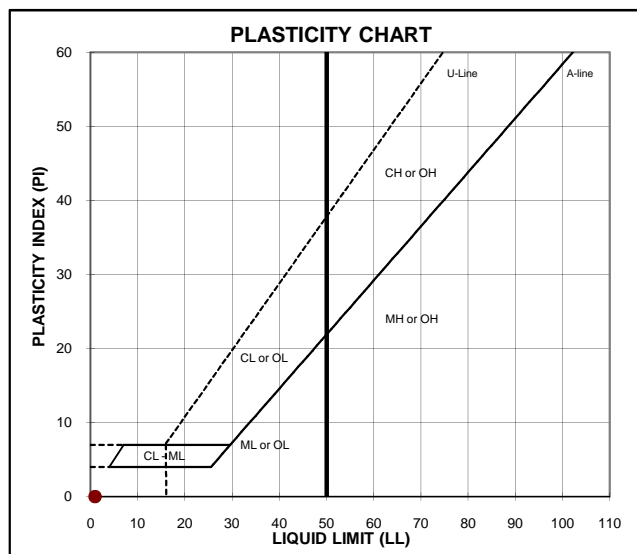
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	100.0	Coarse Sand
	#20	0.85	88.3	
	#40	0.43	63.6	Medium Sand
	#60	0.25	50.5	
	#100	0.15	40.3	Fine Sand
	#200	0.075	20.5	
Fines				20.52



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
22.2				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

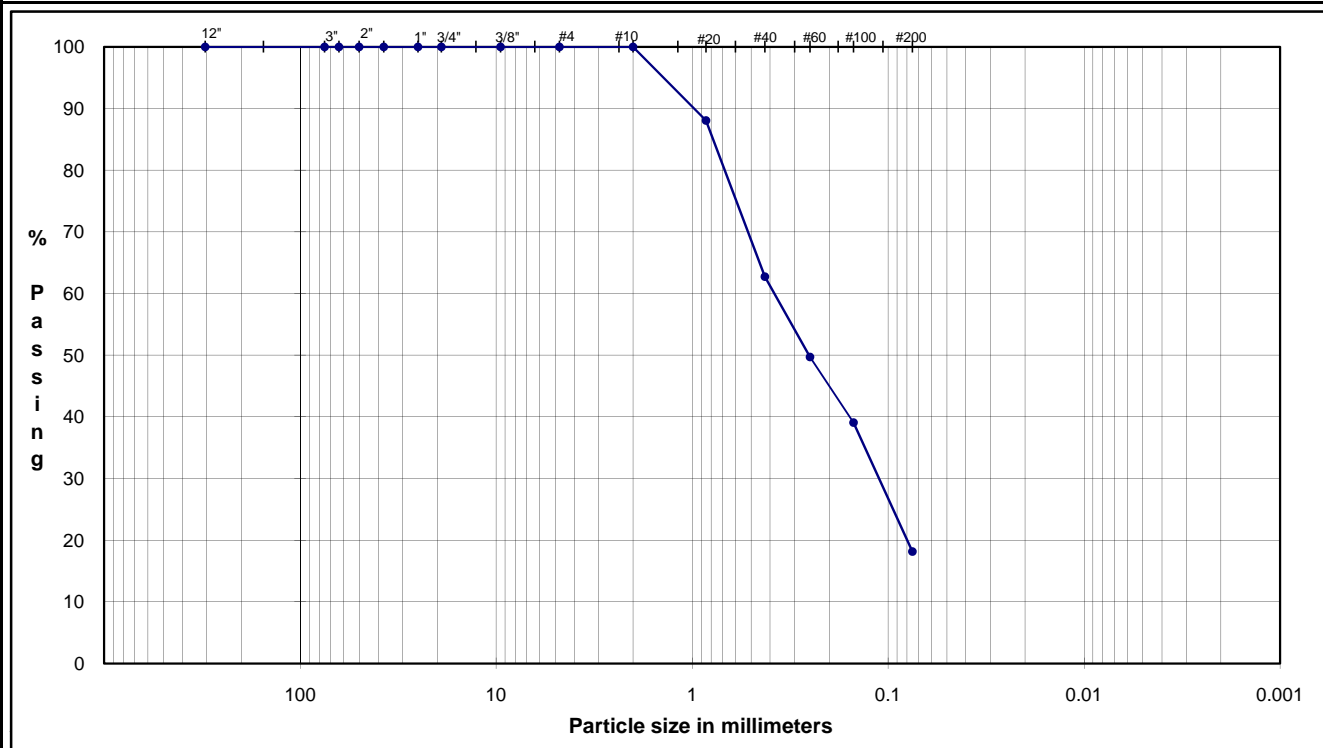
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C1-WS4 0

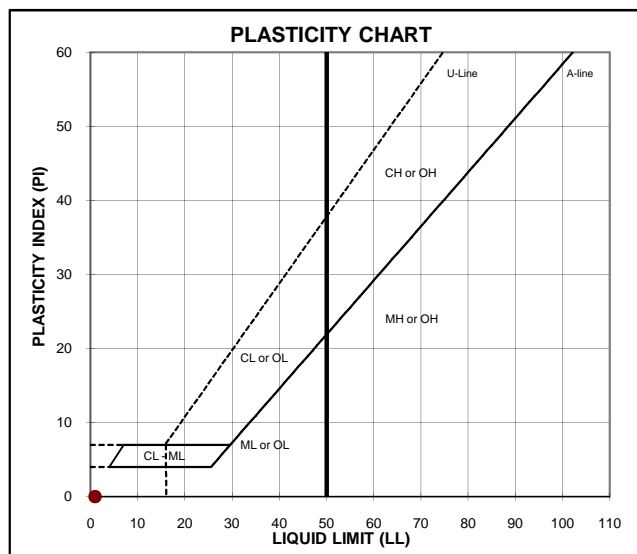
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size			Particle Size	
	(mm)	% Passing	Classification	Percentage	
	12.0"	304.8	100.0	Cobbles	0.00
	3.0"	75.0	100.0		
	2.5"	63.5	100.0		
	2.0"	50.0	100.0		
	1.5"	37.5	100.0		
	1.0"	25.0	100.0	Coarse Gravel	0.00
	0.75"	19.0	100.0		
	0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00	
#4	4.8	100.0			
#10	2.00	100.0	Coarse Sand	0.00	
#20	0.85	88.0	Medium Sand	37.27	
#40	0.43	62.7			
#60	0.25	49.7			
#100	0.15	39.1			
#200	0.075	18.2	Fine Sand	44.57	
Fines				18.17	



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
20.8				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

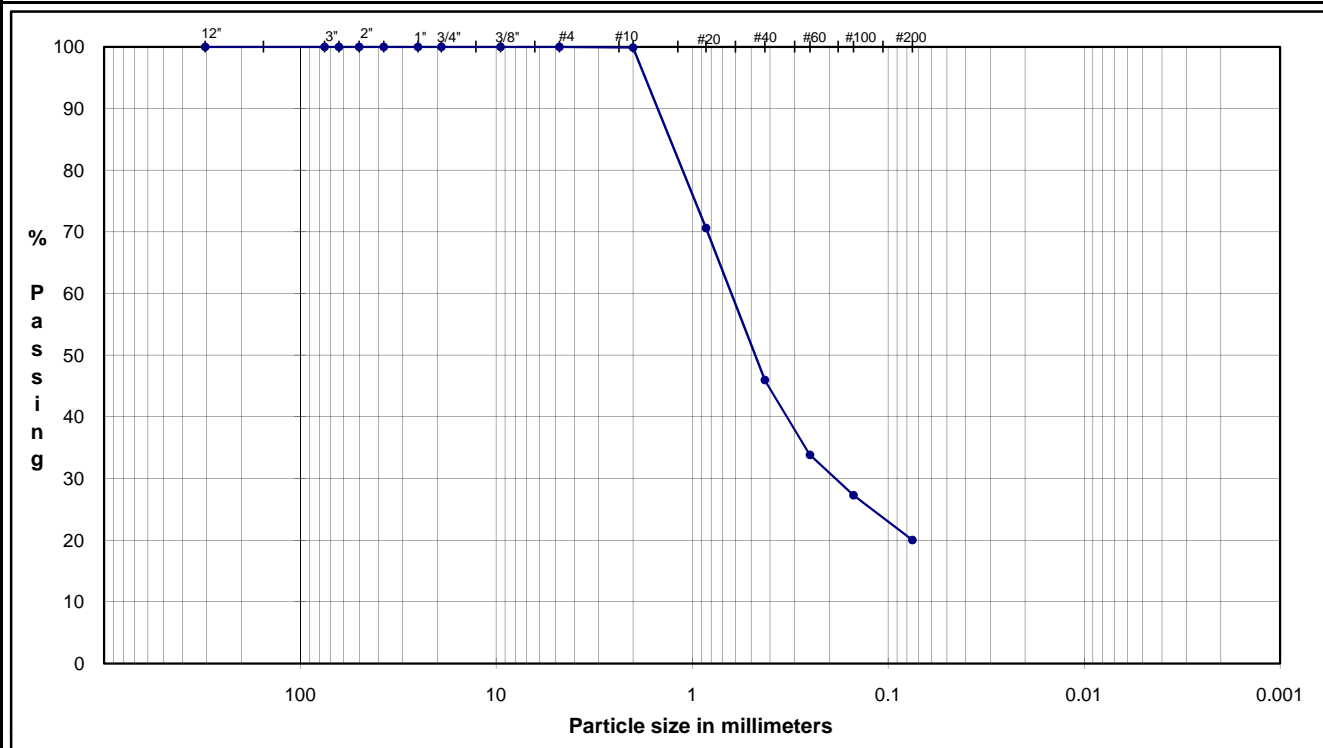
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-B 0

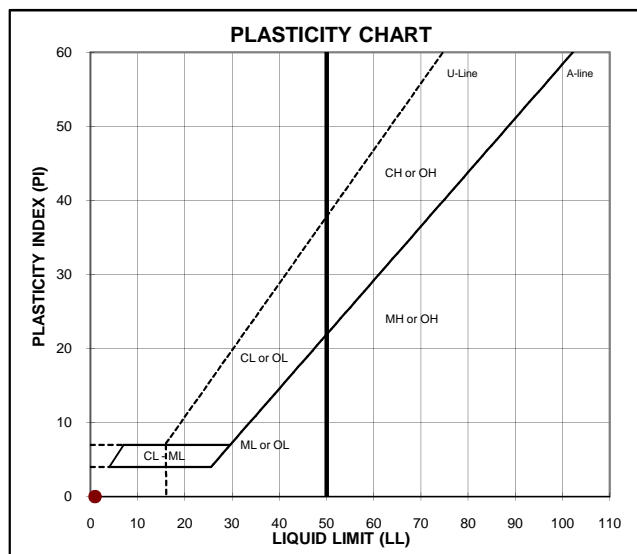
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	99.9	Coarse Sand
	#20	0.85	70.6	
	#40	0.43	46.0	Medium Sand
	#60	0.25	33.8	
	#100	0.15	27.3	
	#200	0.075	20.0	Fine Sand
				Fines
				20.00



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
13.0				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: C-F SAND

some silt

USCS:

SM

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

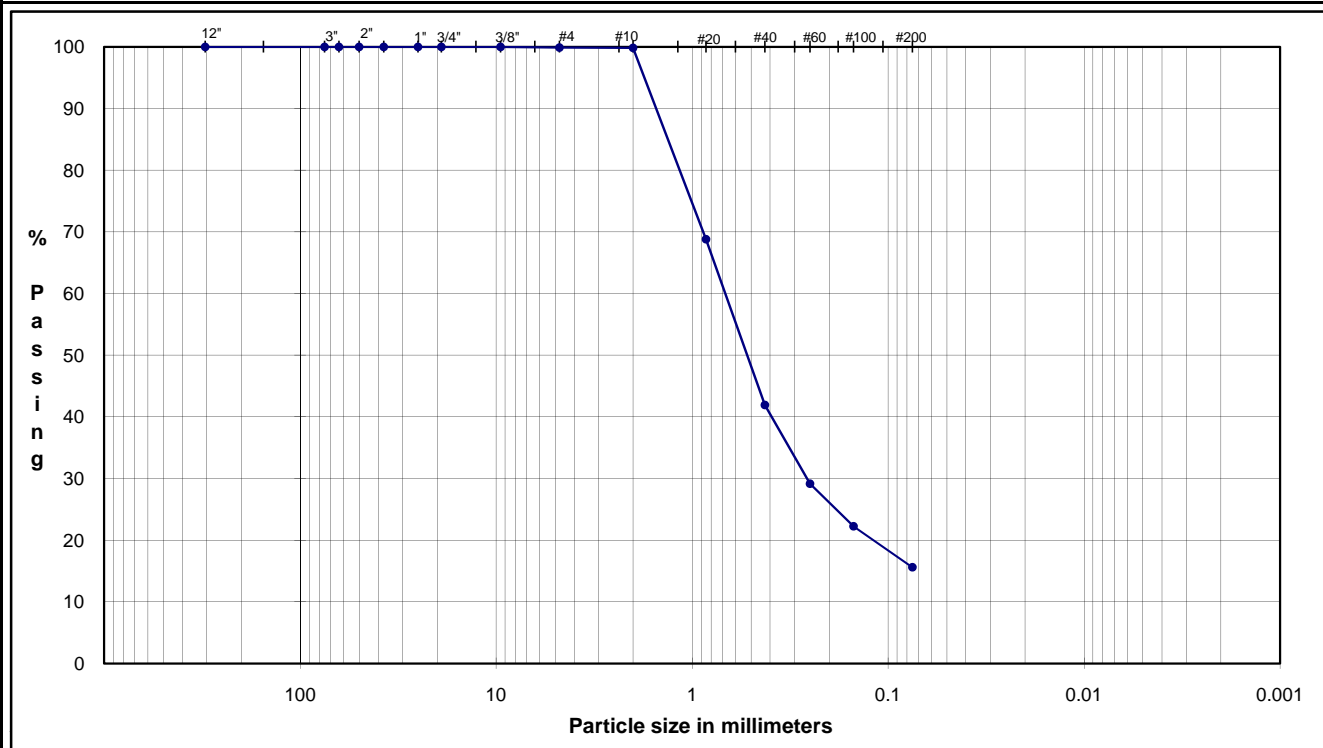
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-C 0

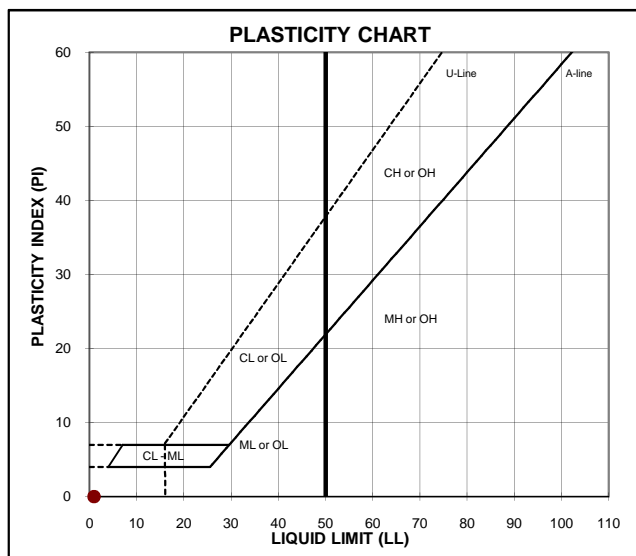
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	% Passing		Percentage	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	99.9	Fine Gravel
	#10	2.00	99.8	Coarse Sand
	#20	0.85	68.8	
	#40	0.43	41.9	Medium Sand
	#60	0.25	29.1	
	#100	0.15	22.2	
	#200	0.075	15.6	Fine Sand
				Fines
				15.60



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
17.0				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND
some silt, trace f gravel

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

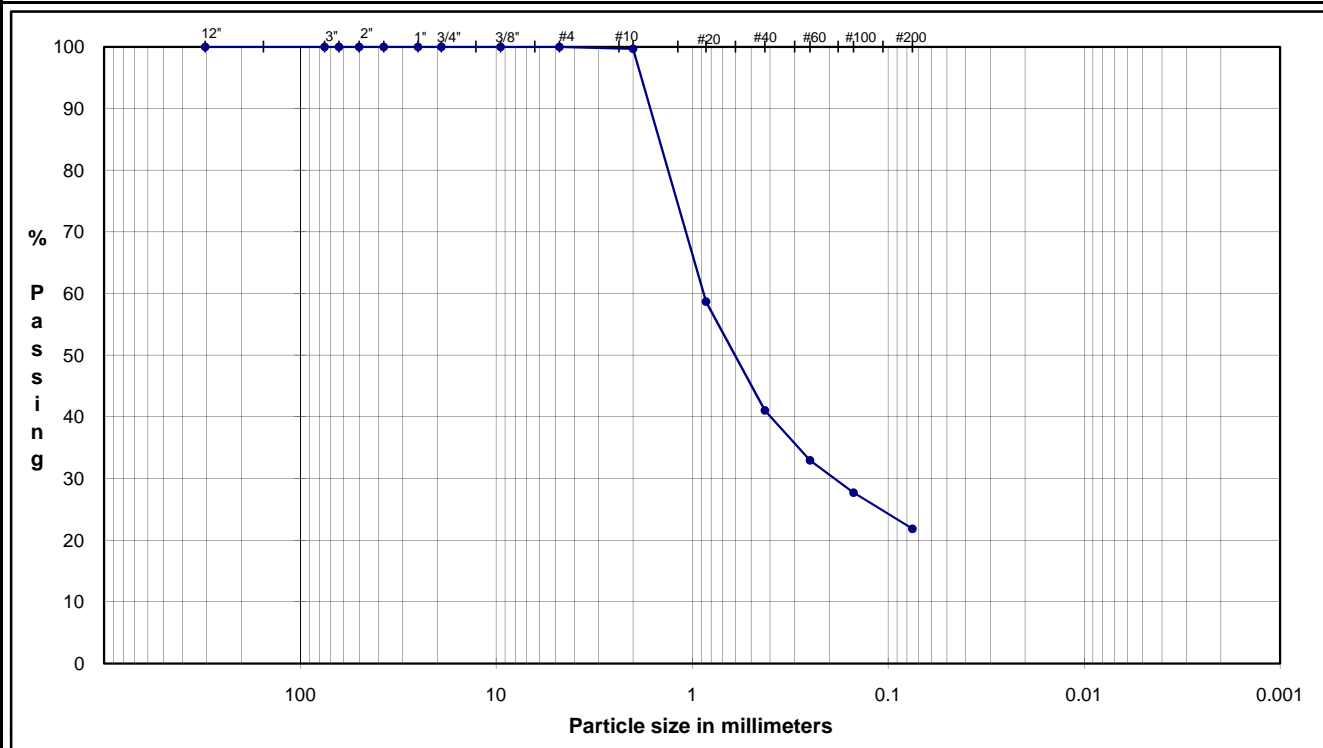
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-D 0

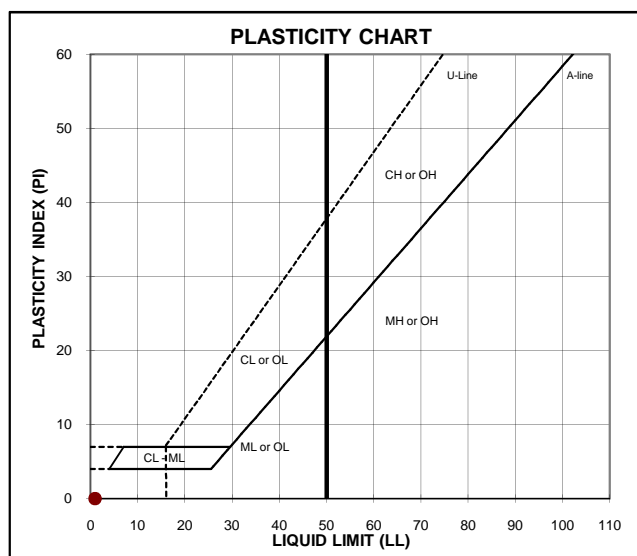
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	99.7	Coarse Sand
	#20	0.85	58.7	
	#40	0.43	41.0	Medium Sand
	#60	0.25	32.9	
	#100	0.15	27.7	
	#200	0.075	21.9	Fine Sand
				Fines
				21.85



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
7.3				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: C-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

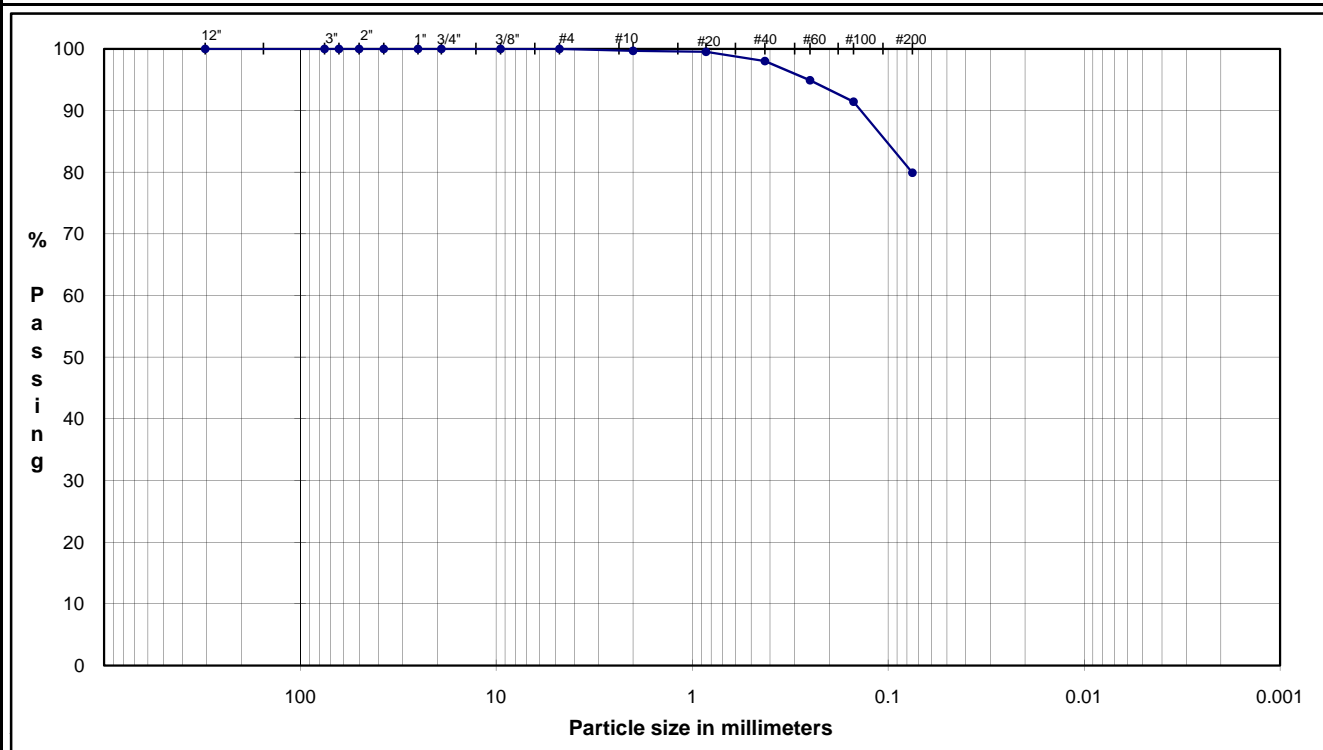
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-E 0

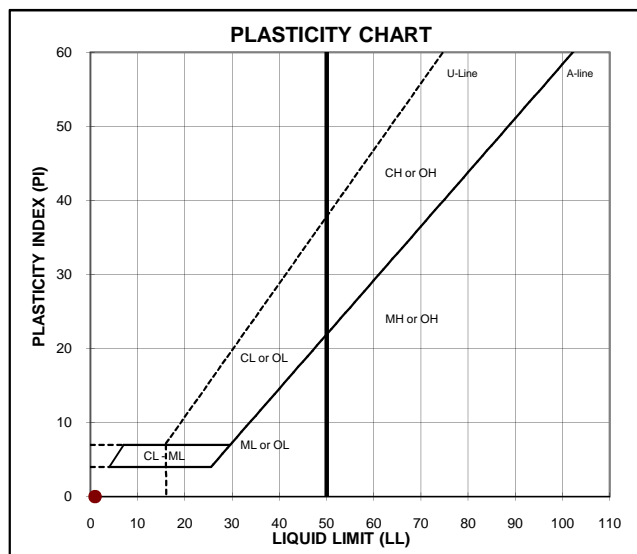
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
12.0"	304.8	100.0	Cobbles	0.00
3.0"	75.0	100.0		
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0	Coarse Gravel	0.00
0.75"	19.0	100.0		
0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00
#4	4.8	100.0		
#10	2.00	99.7	Coarse Sand	0.33
#20	0.85	99.6	Medium Sand	1.63
#40	0.43	98.0		
#60	0.25	94.9		
#100	0.15	91.4	Fine Sand	18.13
#200	0.075	79.9		
			Fines	79.91



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
72.5				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION:

SILT
some c-f sand

USCS:

0

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

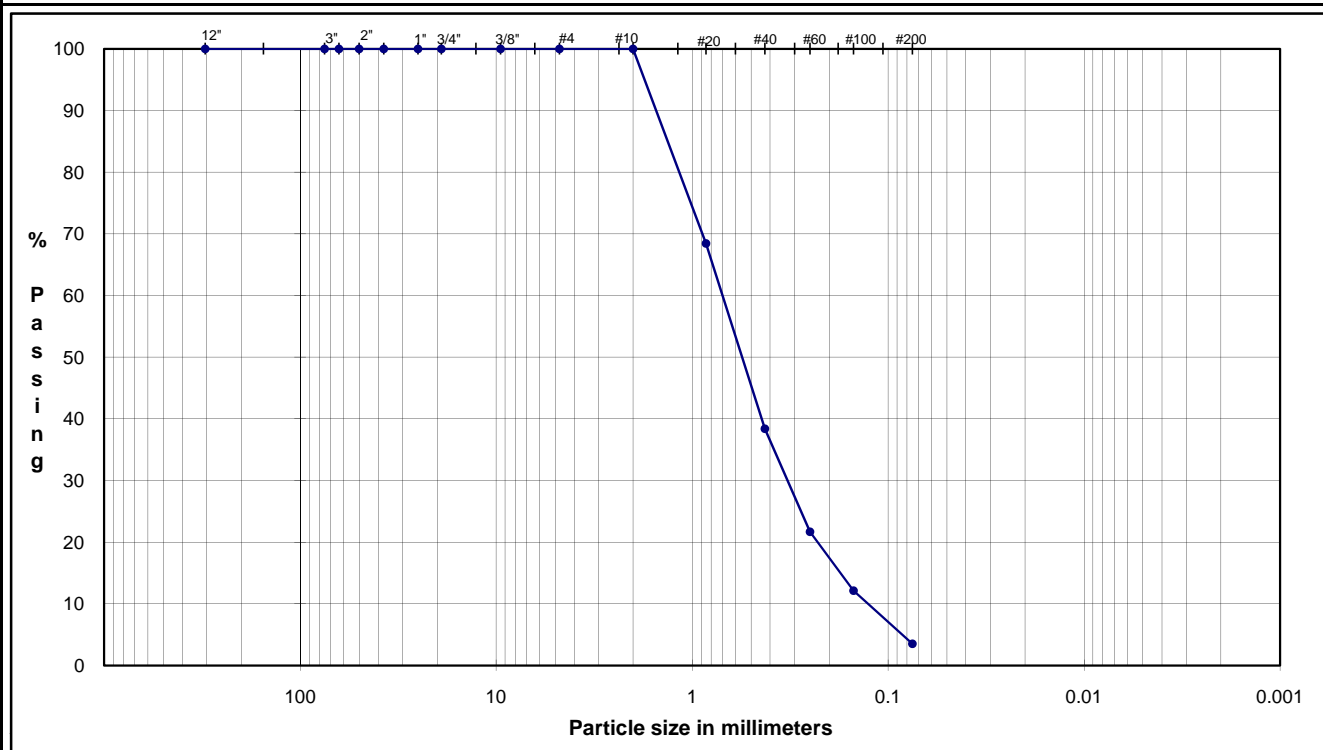
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-F 0

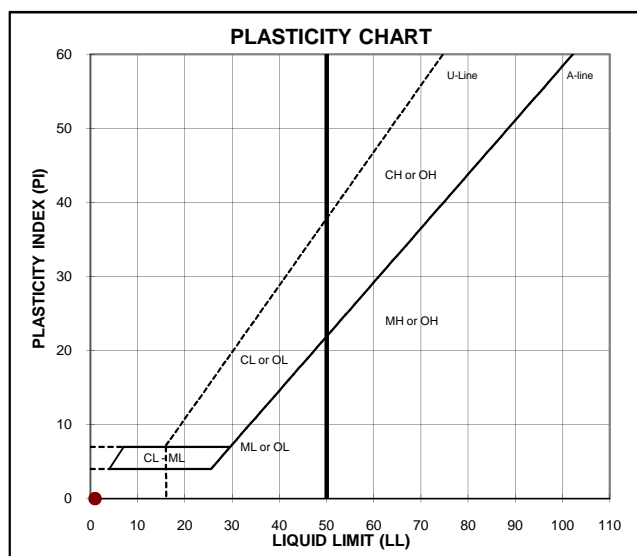
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	Coarse Sand
	#20	0.85	68.5	
	#40	0.43	38.4	Medium Sand
	#60	0.25	21.7	
	#100	0.15	12.1	
	#200	0.075	3.5	Fine Sand
				Fines
				3.50



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
22.9				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

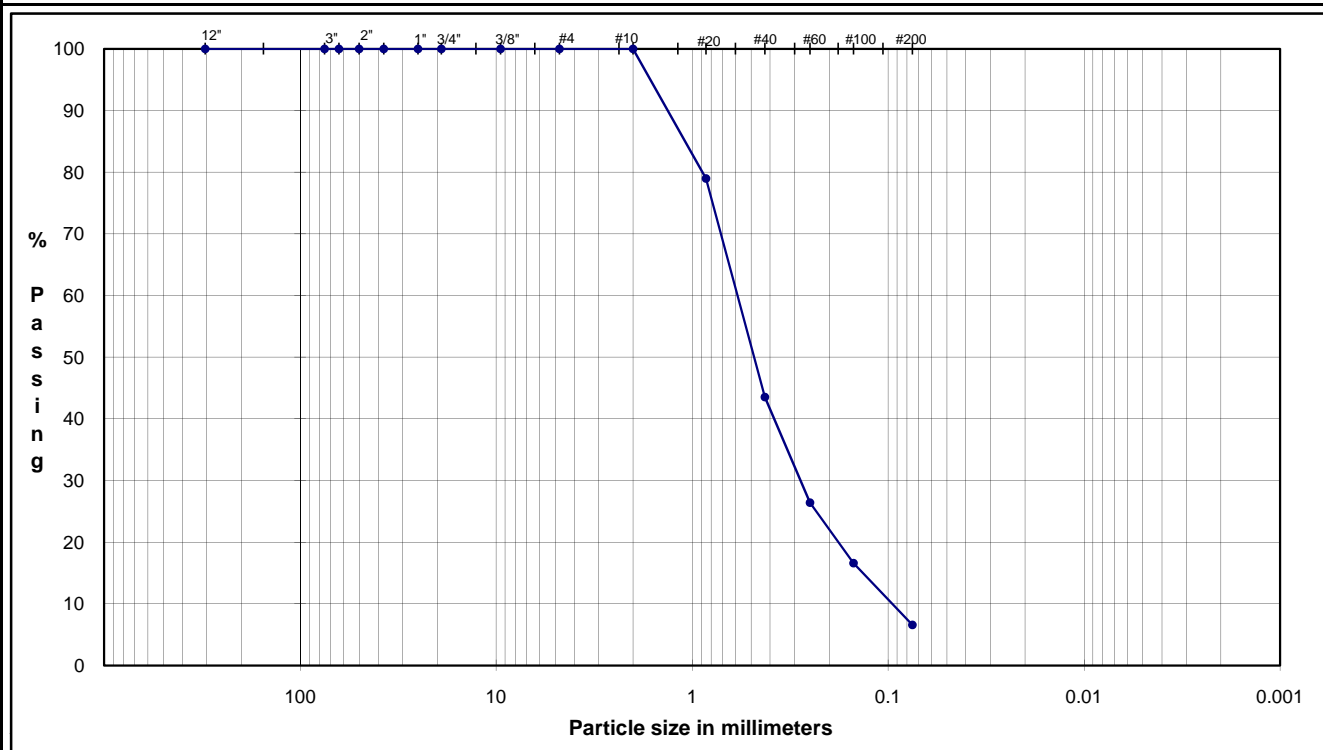
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2WS-1 0

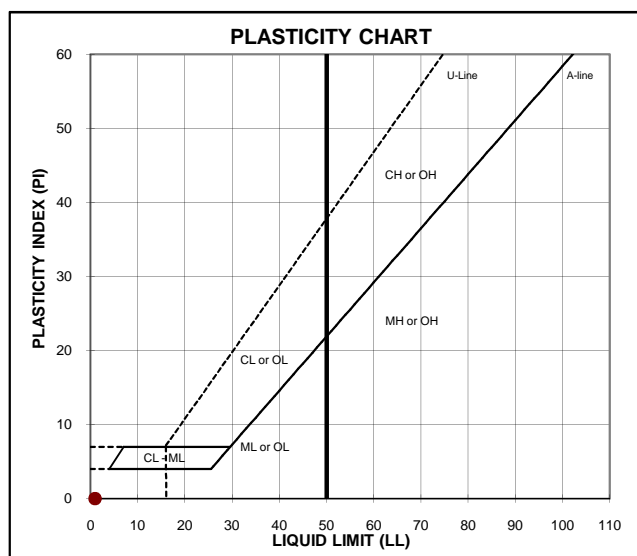
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	Coarse Gravel
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	100.0	
	#20	0.85	79.0	Medium Sand
	#40	0.43	43.5	
	#60	0.25	26.4	
	#100	0.15	16.6	Fine Sand
	#200	0.075	6.6	
	Fines			6.58



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
17.8				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SP/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

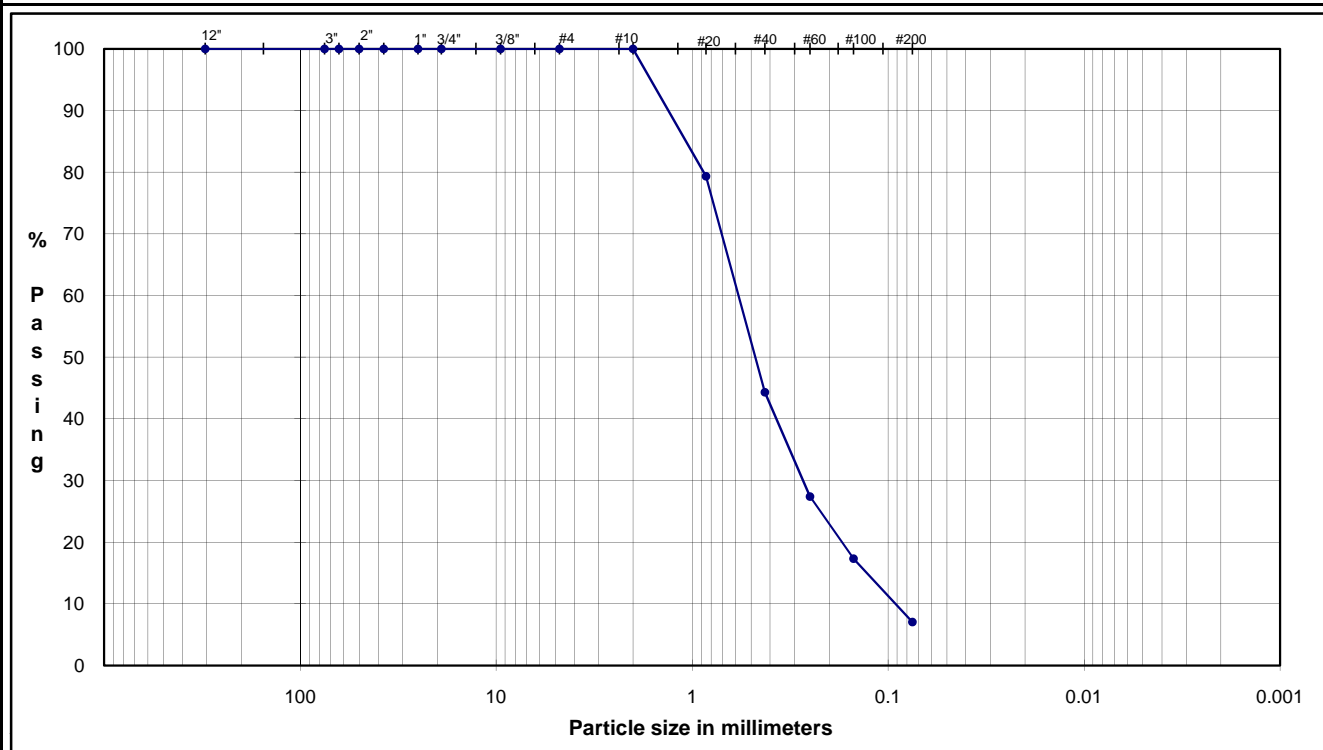
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-WS2 0

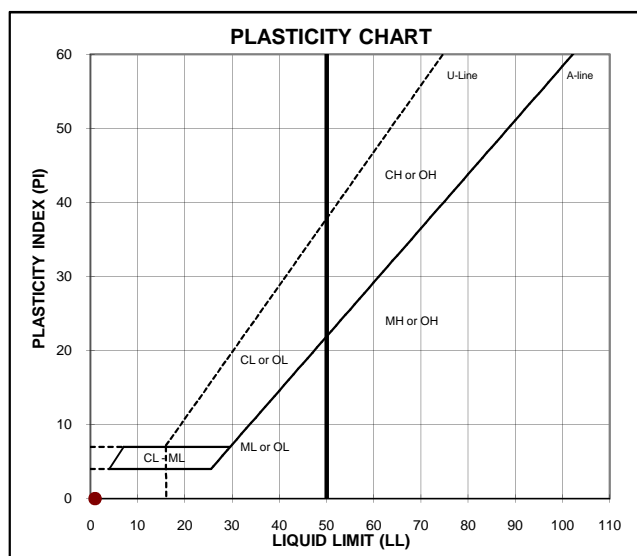
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
12.0"	304.8	100.0	Cobbles	0.00
3.0"	75.0	100.0		
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0	Coarse Gravel	0.00
0.75"	19.0	100.0		
0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00
#4	4.8	100.0		
#10	2.00	100.0	Coarse Sand	0.00
#20	0.85	79.3	Medium Sand	55.72
#40	0.43	44.3		
#60	0.25	27.4		
#100	0.15	17.3	Fine Sand	37.25
#200	0.075	7.0		
			Fines	7.03



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
21.9				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

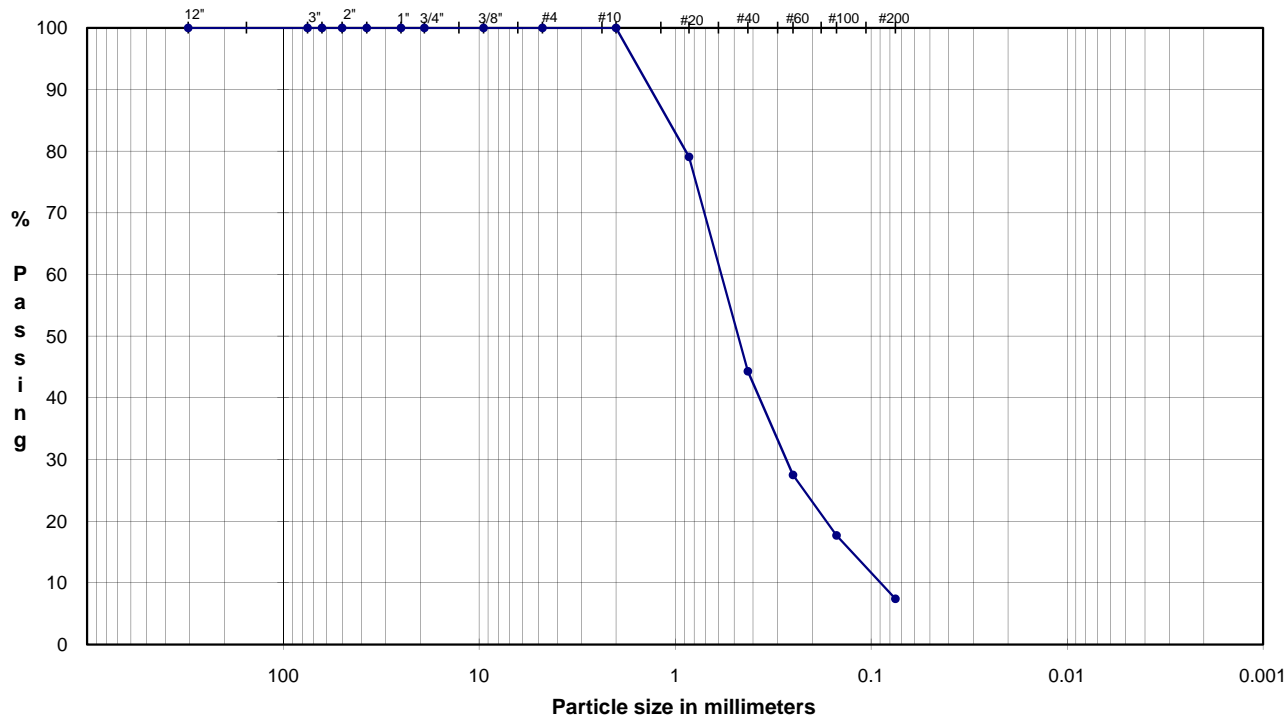
USCS: SW/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

ASTM D421, D422, D4318

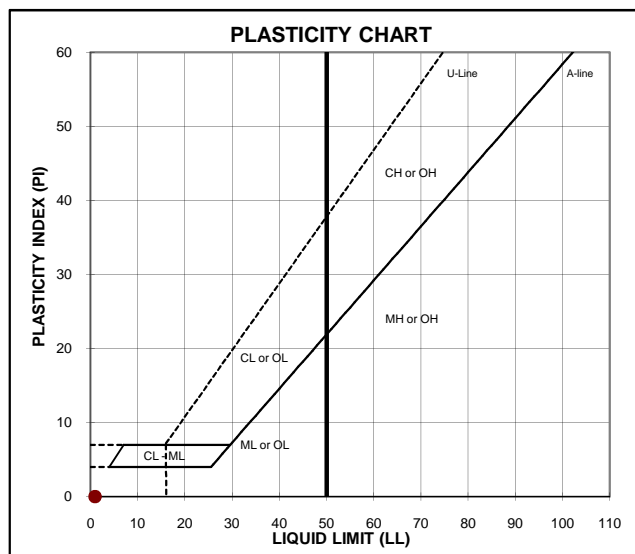
Depth: 0

TYPE: **0**



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size			Particle Size	
	(mm)	% Passing	Classification	Percentage	
	12.0"	304.8	100.0	Cobbles	0.00
	3.0"	75.0	100.0		
	2.5"	63.5	100.0		
	2.0"	50.0	100.0	Coarse Gravel	0.00
	1.5"	37.5	100.0		
	1.0"	25.0	100.0		
	0.75"	19.0	100.0		
	0.50"	12.7	100.0		
	0.375"	9.5	100.0		
	#4	4.8	100.0	Fine Gravel	0.00
	#10	2.00	100.0	Coarse Sand	0.00
	#20	0.85	79.1	Medium Sand	55.71
#40	0.43	44.3			
#60	0.25	27.5			
#100	0.15	17.7			
#200	0.075	7.4	Fine Sand	36.88	
Fines				7.41	



ATTERBERG LIMITS
Method -B (Dry preparation)

M _c	LL	PL	PI	LI
21.3				

LL (oven-dried)
 $< 0.75 = \text{ORGANIC}$
 (OL/OH)

TECH	TCM
DATE	11/4/09
CHECK	TCM
REVIEW	

DESCRIPTION:	M-F SAND little silt
---------------------	-------------------------

USCS:	SW/SM
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PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

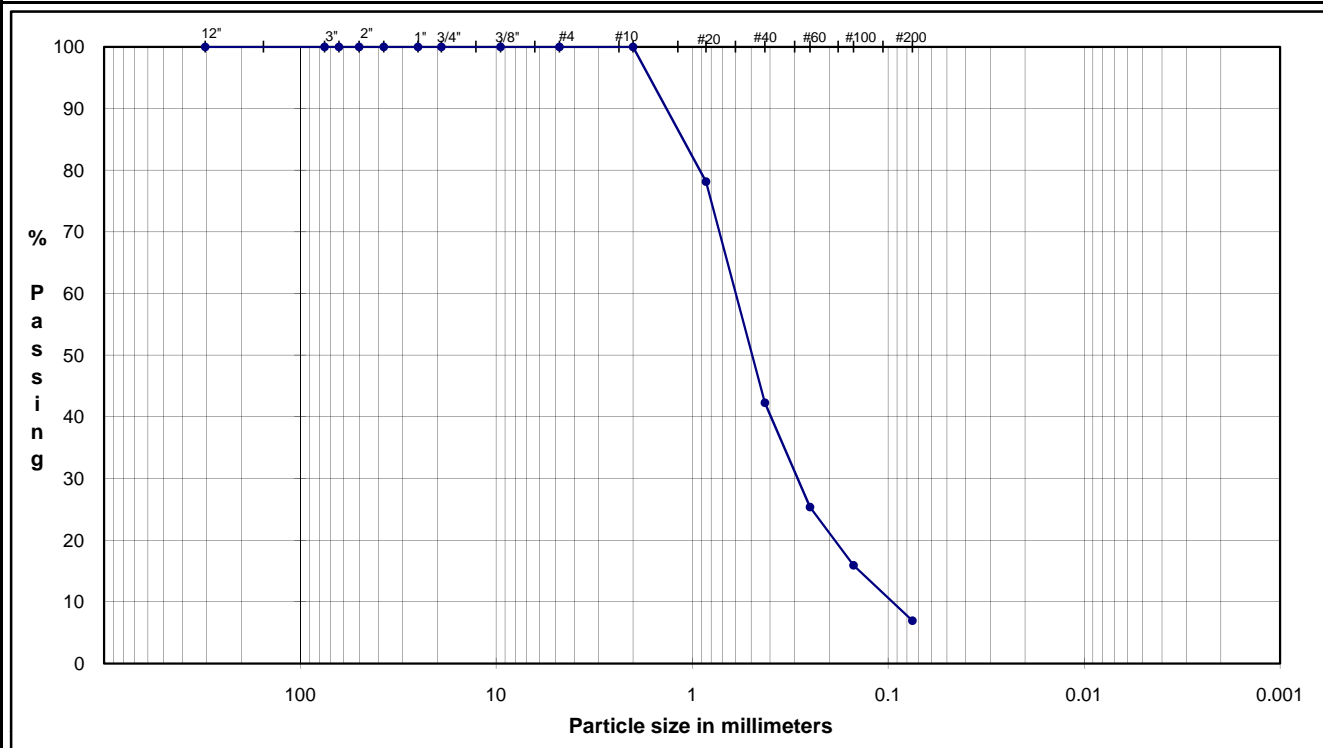
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-WS4 0

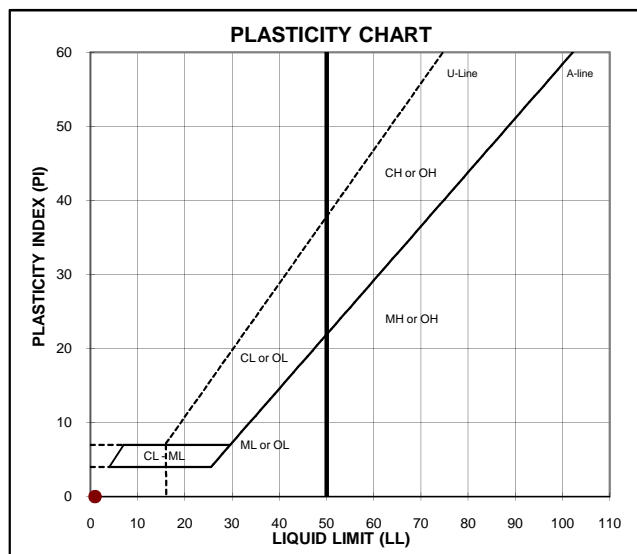
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	Coarse Gravel
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	100.0	
	#20	0.85	78.1	Medium Sand
	#40	0.43	42.3	
	#60	0.25	25.4	
	#100	0.15	15.9	Fine Sand
	#200	0.075	6.9	
Fines				6.95



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
24.3				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SW/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

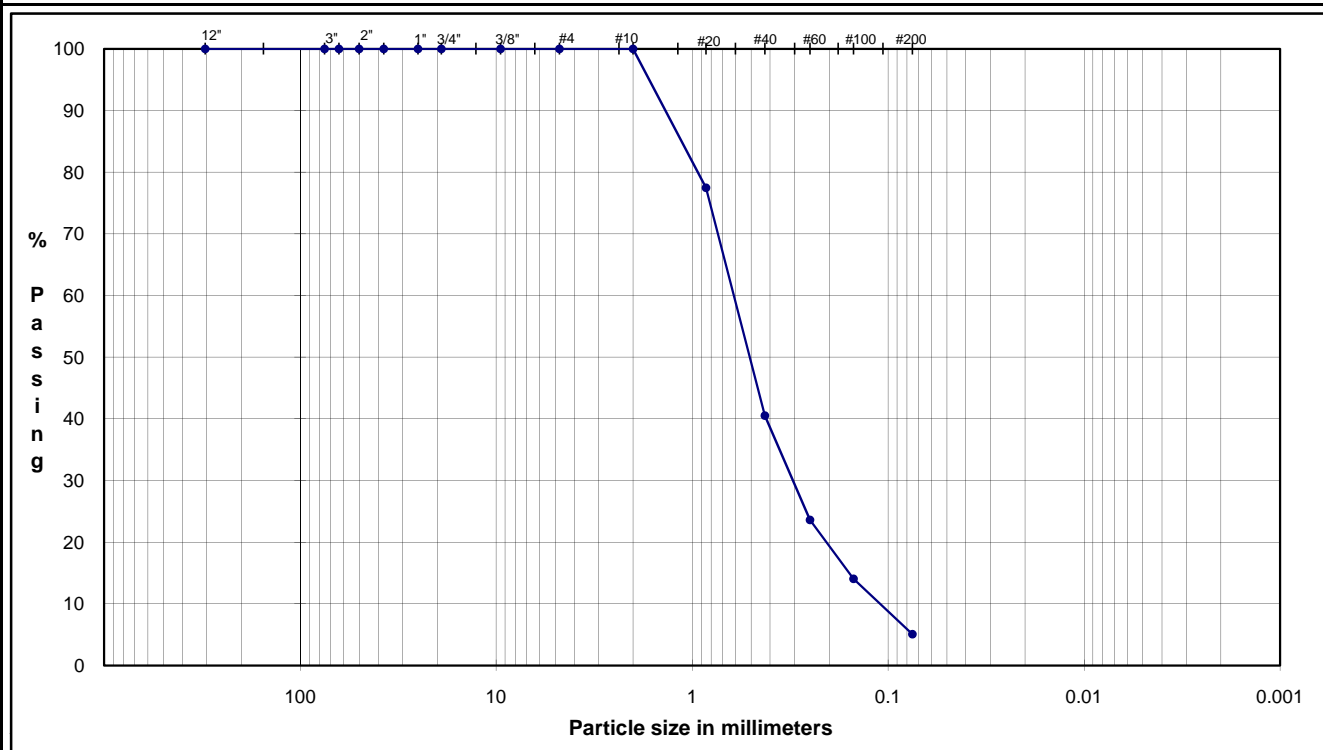
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C2-WS5 0

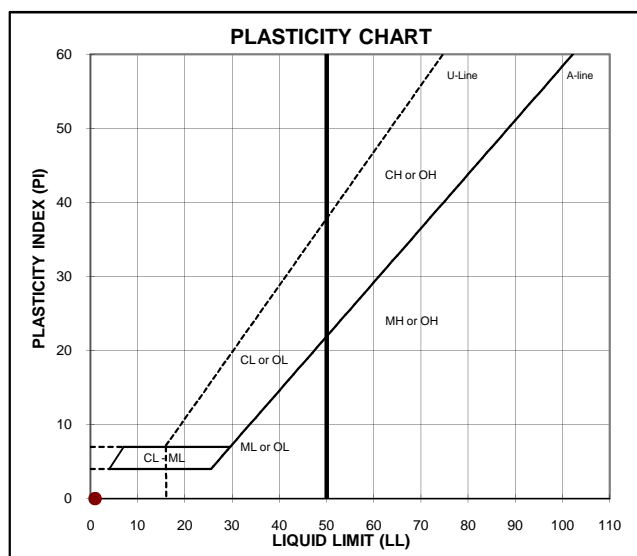
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	
	#20	0.85	77.5	Medium Sand
	#40	0.43	40.5	
	#60	0.25	23.6	
	#100	0.15	14.1	Fine Sand
	#200	0.075	5.0	
Fines				5.05



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
20.7				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

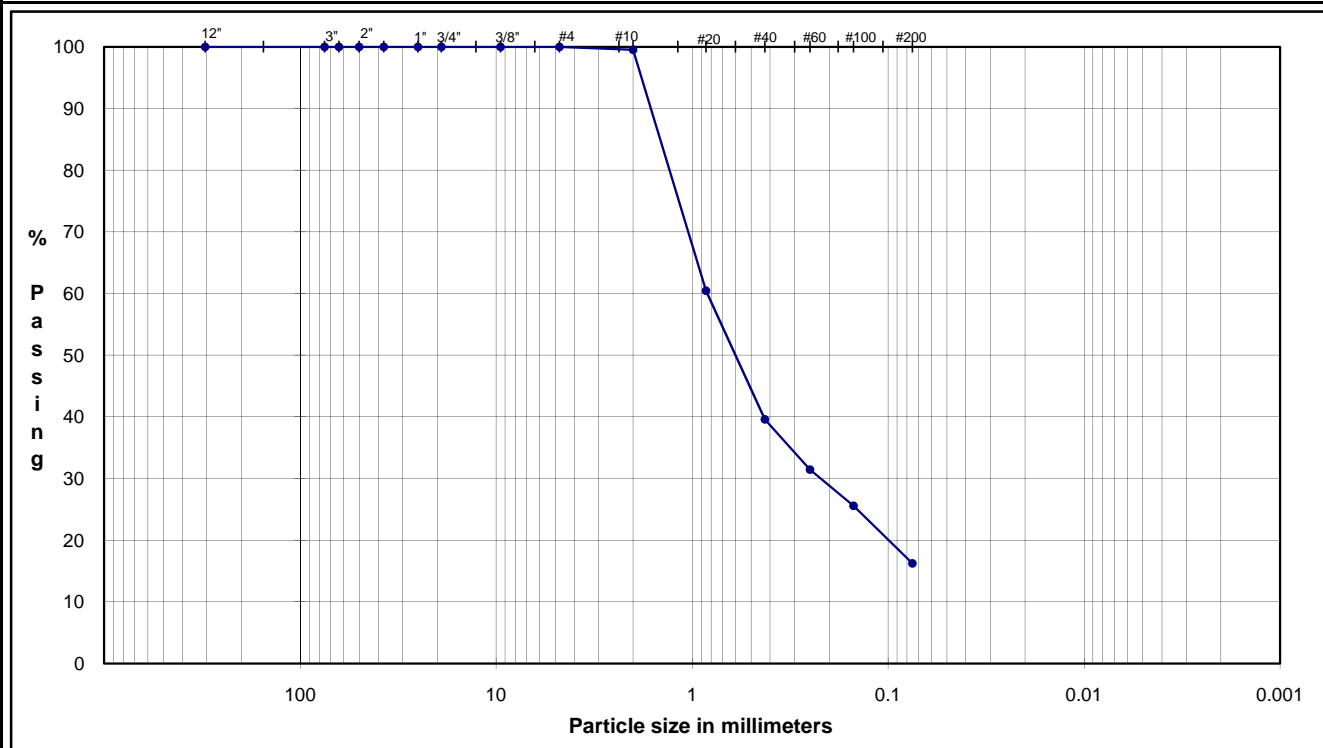
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-B 0

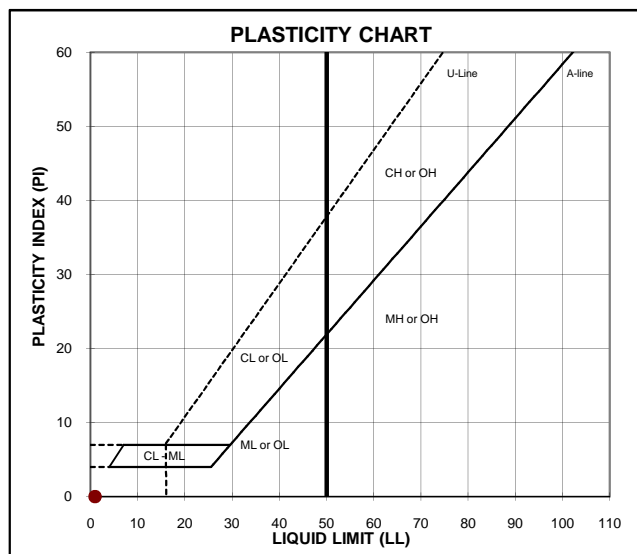
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
12.0"	304.8	100.0	Cobbles	0.00
3.0"	75.0	100.0		
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0	Coarse Gravel	0.00
0.75"	19.0	100.0		
0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00
#4	4.8	100.0		
#10	2.00	99.5	Coarse Sand	0.47
#20	0.85	60.5	Medium Sand	59.93
#40	0.43	39.6		
#60	0.25	31.4		
#100	0.15	25.6	Fine Sand	23.39
#200	0.075	16.2		
			Fines	16.21



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
11.4				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND
some silt

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

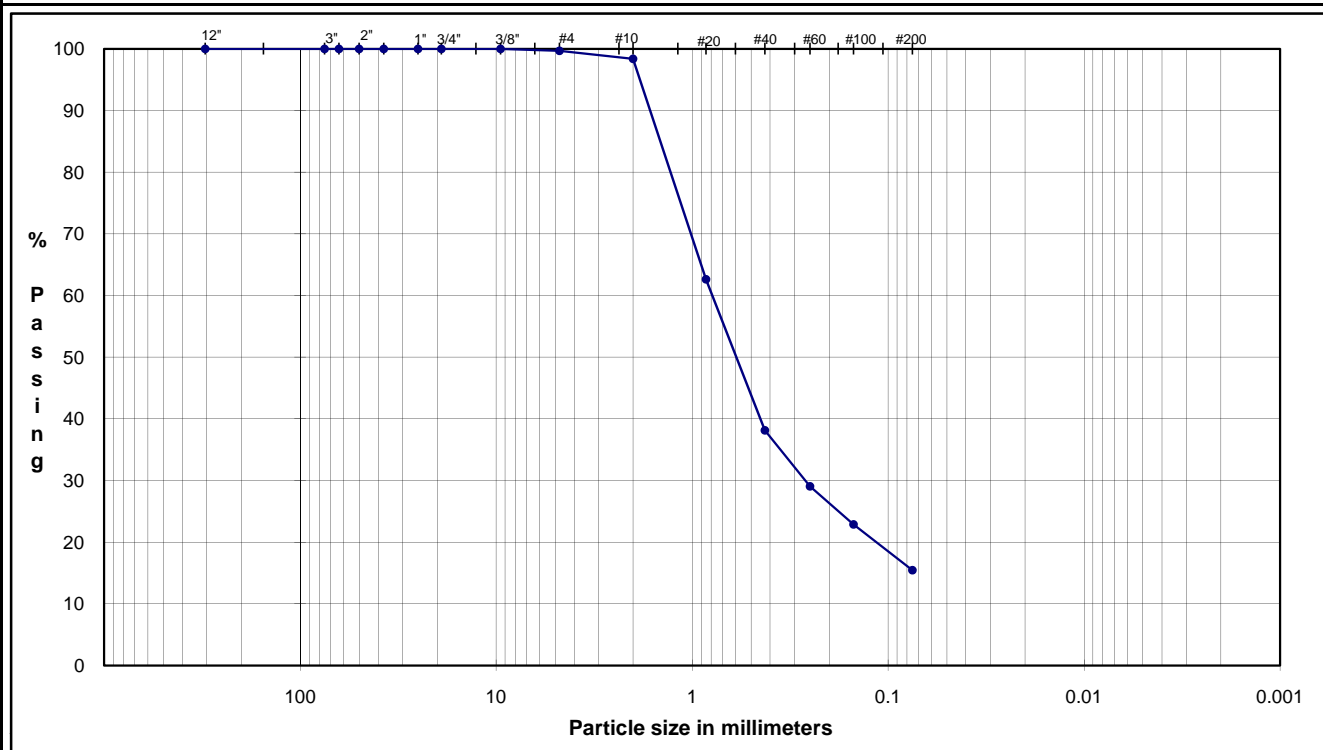
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-C 0

Depth: 0

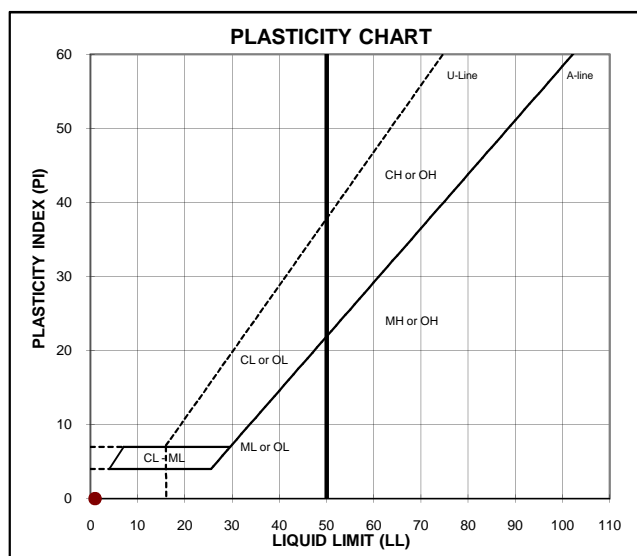
TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

Particle Size (mm)	% Passing	Classification	Percentage
12.0"	304.8	100.0	
3.0"	75.0	100.0	
2.5"	63.5	100.0	
2.0"	50.0	100.0	
1.5"	37.5	100.0	
1.0"	25.0	100.0	
0.75"	19.0	100.0	
0.50"	12.7	100.0	
0.375"	9.5	100.0	
#4	4.8	99.7	
#10	2.00	98.4	
#20	0.85	62.6	
#40	0.43	38.1	
#60	0.25	29.0	
#100	0.15	22.8	
#200	0.075	15.4	
Fines			15.45



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
19.8				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND

some silt, trace f gravel

USCS: SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

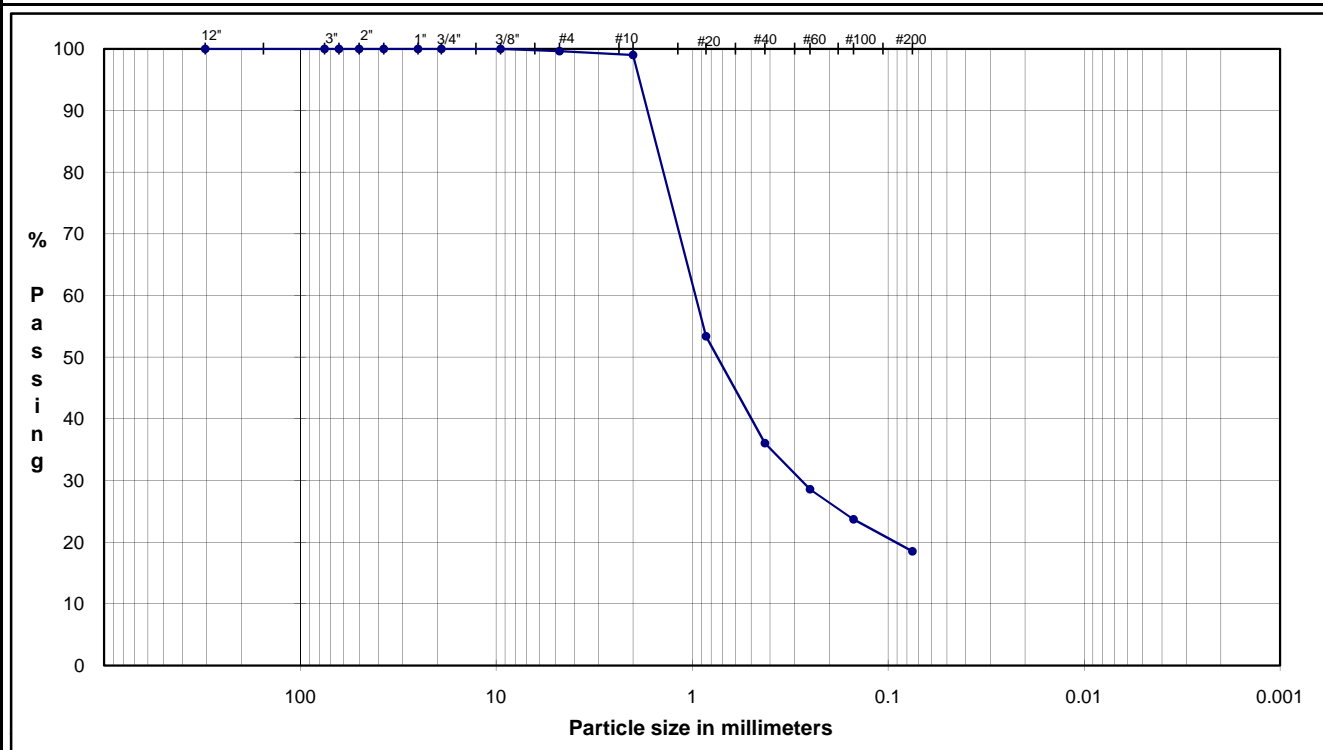
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-D 0

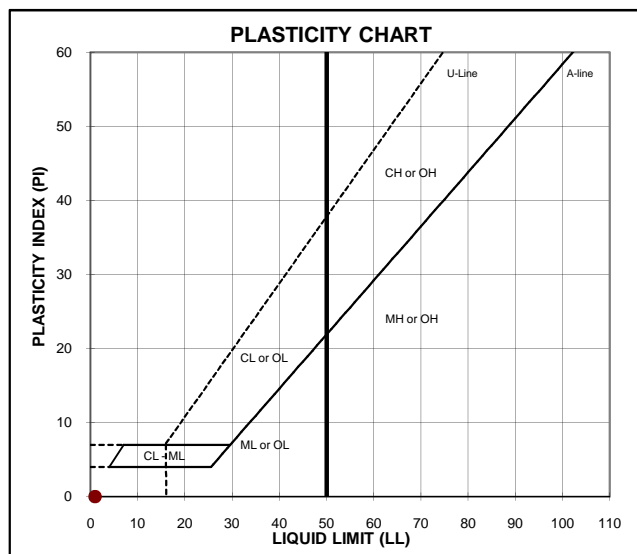
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	(mm)	% Passing	Classification	Percentage
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	99.6	
	#10	2.00	99.0	
	#20	0.85	53.4	
	#40	0.43	36.1	
	#60	0.25	28.6	
	#100	0.15	23.7	
	#200	0.075	18.5	
			Fines	18.53



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
5.5				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION:

C-F SAND
some silt, trace f gravel

USCS:

SM

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

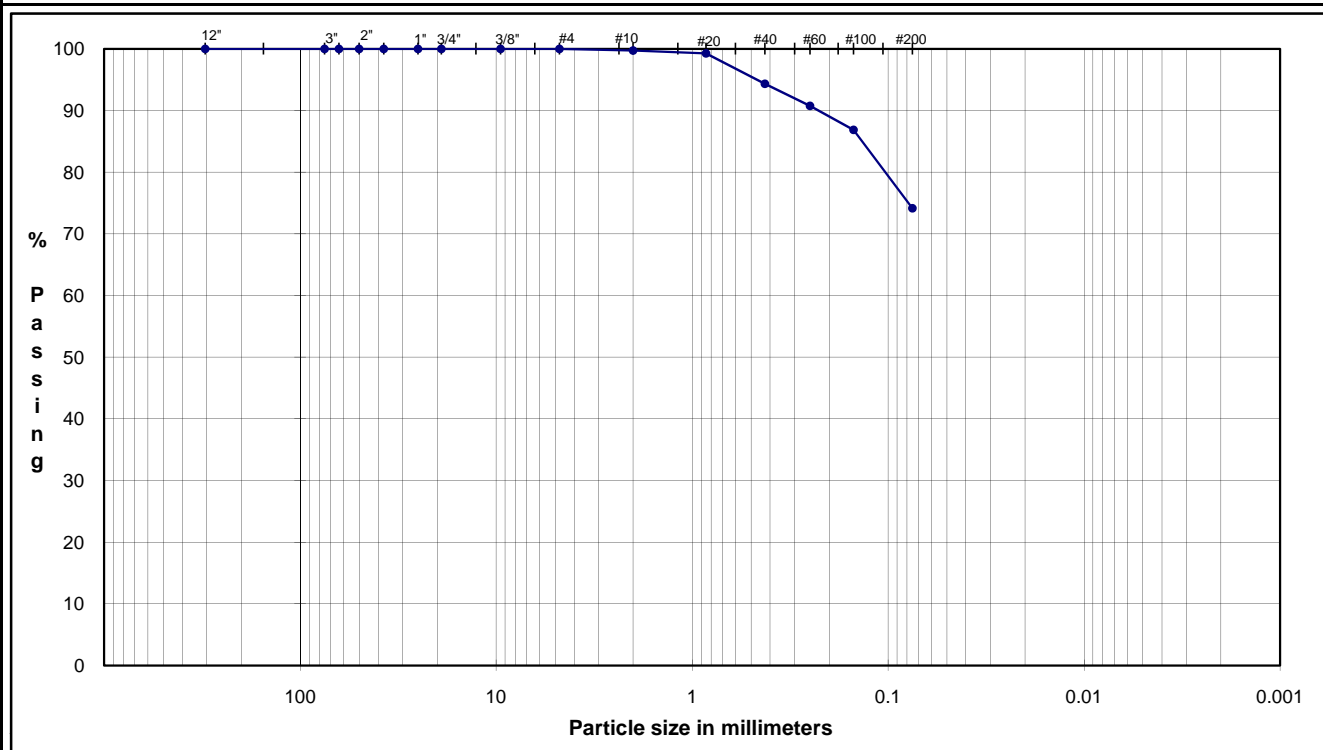
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-E 0

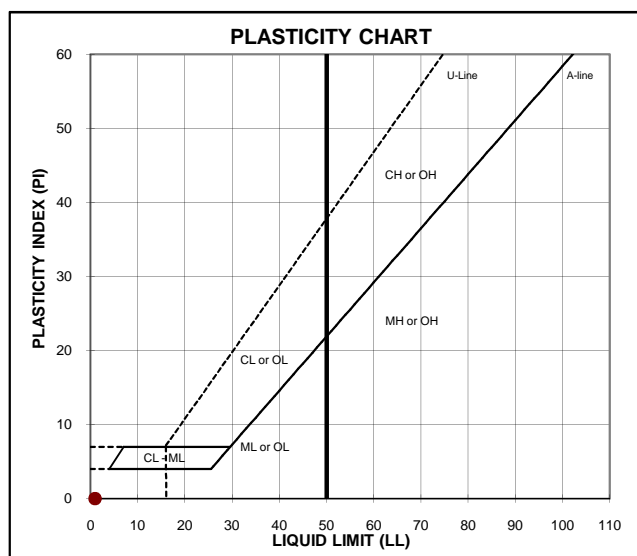
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	Coarse Gravel
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	99.8	
	#20	0.85	99.3	Medium Sand
	#40	0.43	94.4	
	#60	0.25	90.7	
	#100	0.15	86.9	Fine Sand
	#200	0.075	74.2	
Fines				74.16



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
88.7				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION:

SILT
some c-f sand

USCS:

0

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

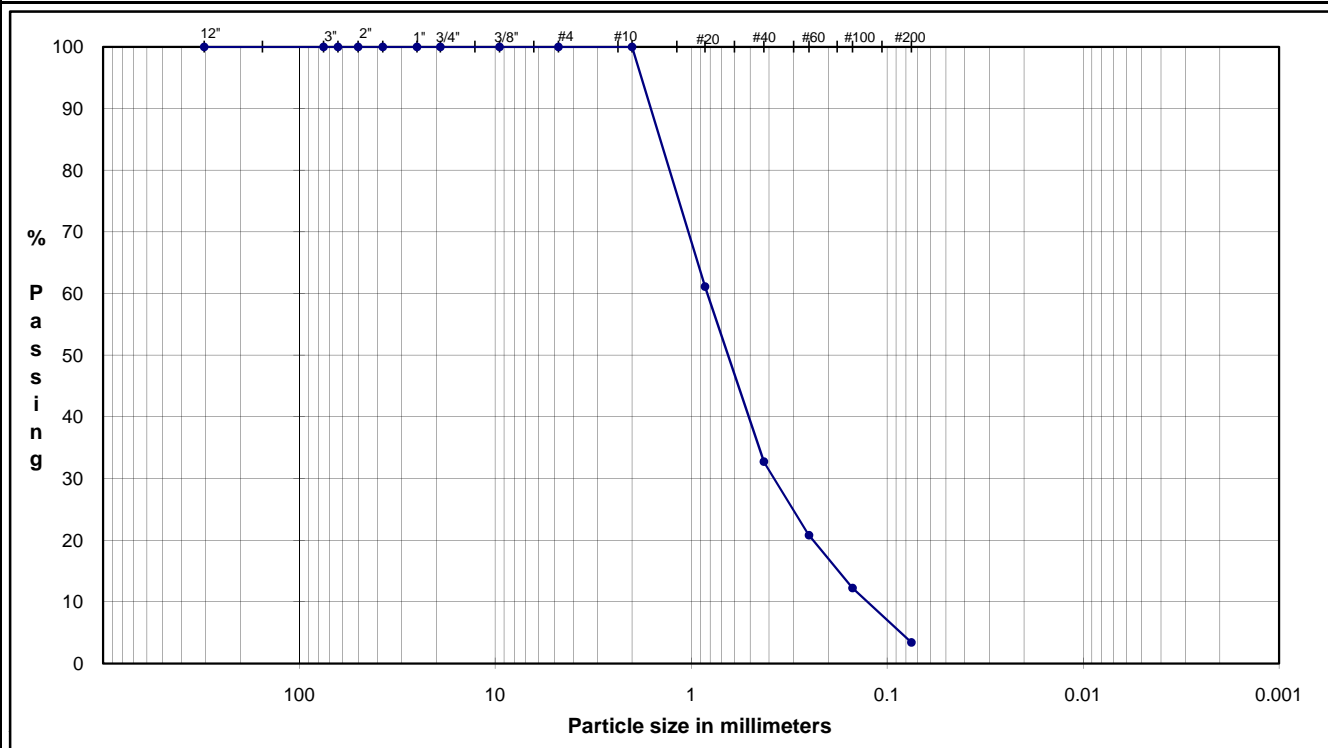
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-F 0

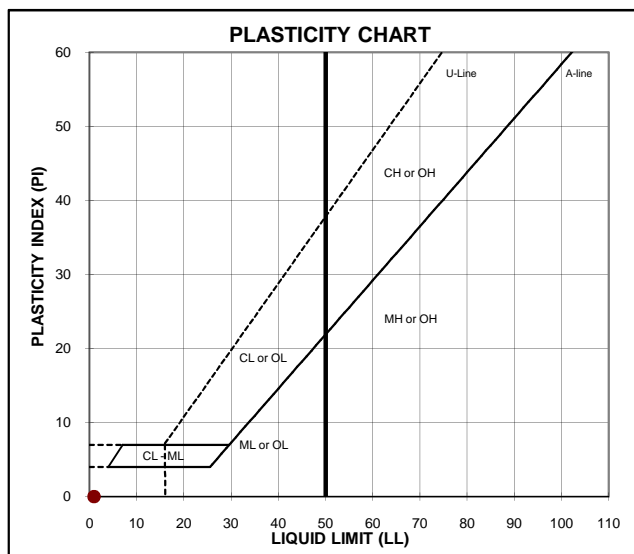
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
12.0"	304.8	100.0	Cobbles	0.00
3.0"	75.0	100.0		
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0	Coarse Gravel	0.00
0.75"	19.0	100.0		
0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00
#4	4.8	100.0		
#10	2.00	100.0	Coarse Sand	0.00
#20	0.85	61.1	Medium Sand	67.29
#40	0.43	32.7		
#60	0.25	20.8		
#100	0.15	12.2	Fine Sand	29.30
#200	0.075	3.4		
			Fines	3.41



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
21.8				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

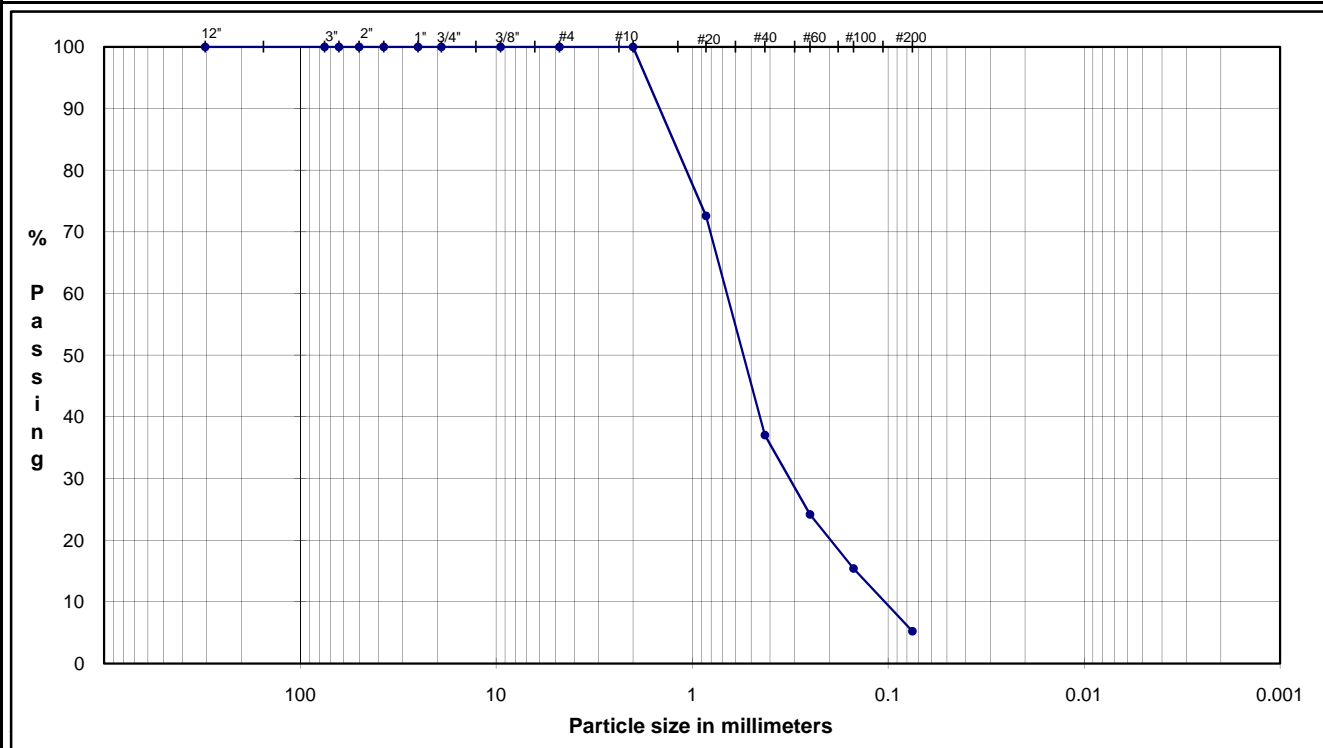
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-WS1 0

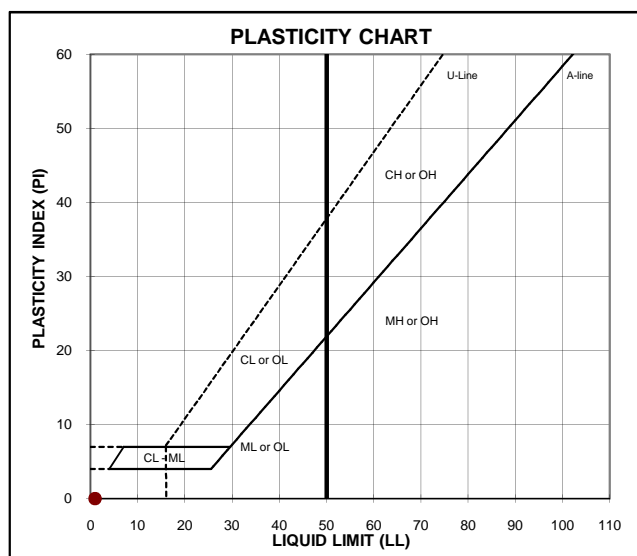
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	Coarse Gravel
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	100.0	
	#20	0.85	72.6	Medium Sand
	#40	0.43	37.0	
	#60	0.25	24.2	
	#100	0.15	15.4	Fine Sand
	#200	0.075	5.2	
	Fines			5.22



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
19.8				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SW/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

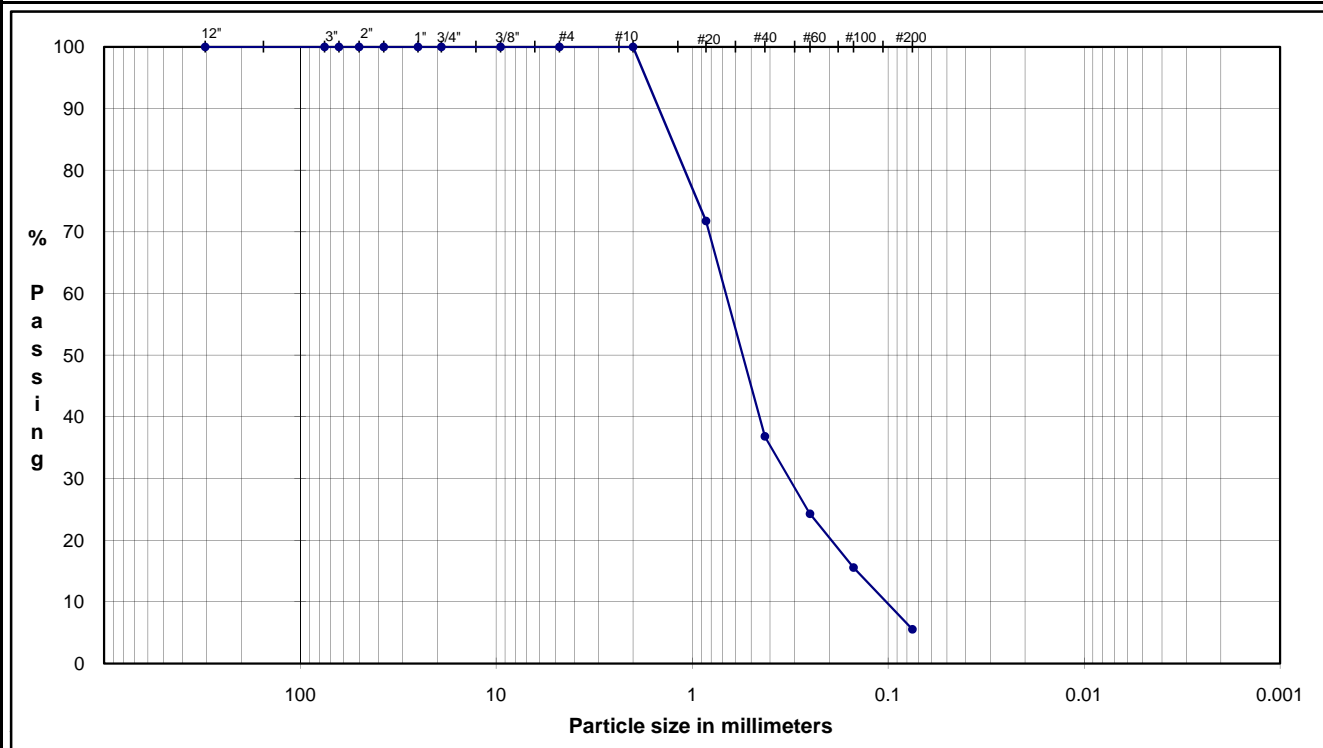
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-WS2 0

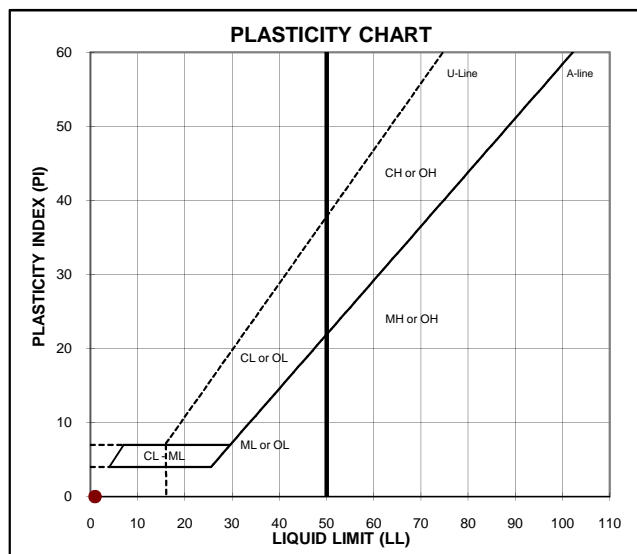
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	
	#10	2.00	100.0	Coarse Sand
	#20	0.85	71.8	
	#40	0.43	36.8	
	#60	0.25	24.3	
	#100	0.15	15.5	Fine Sand
	#200	0.075	5.5	
			Fines	5.54



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
20.2				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SW/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

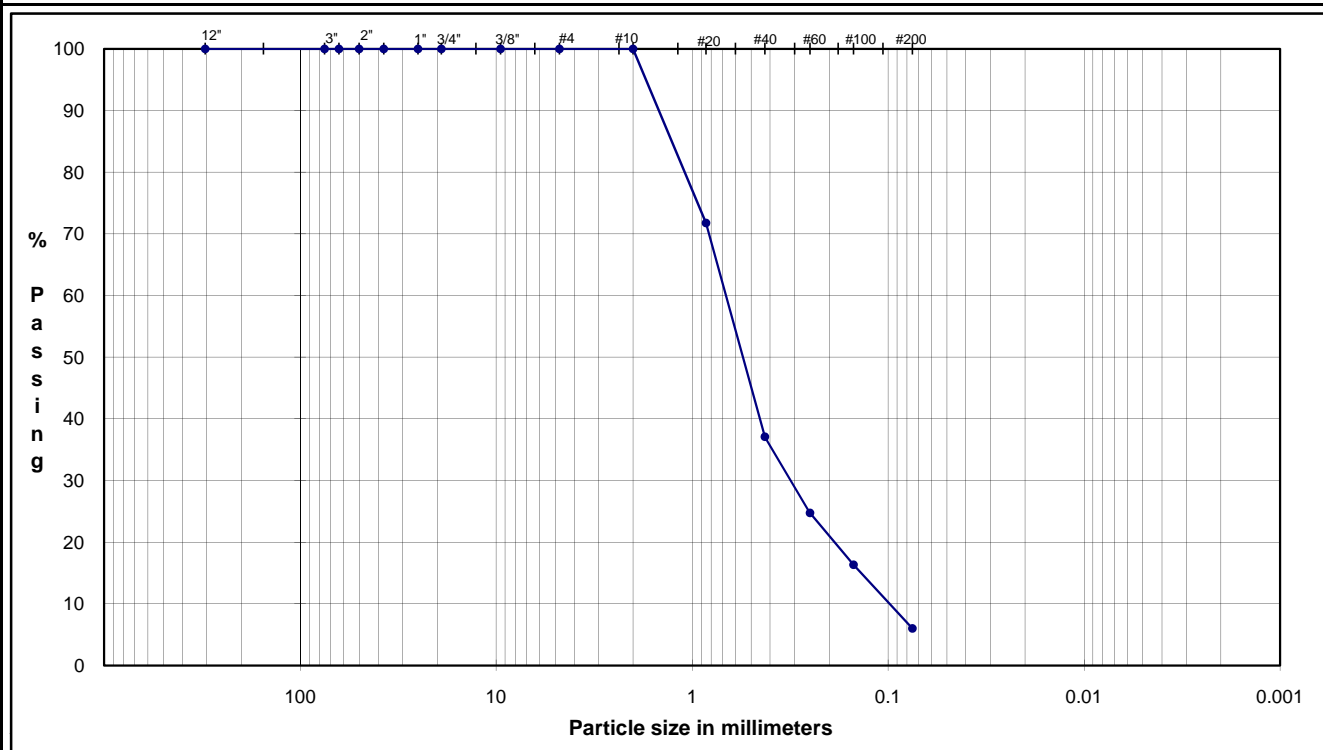
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-WS3 0

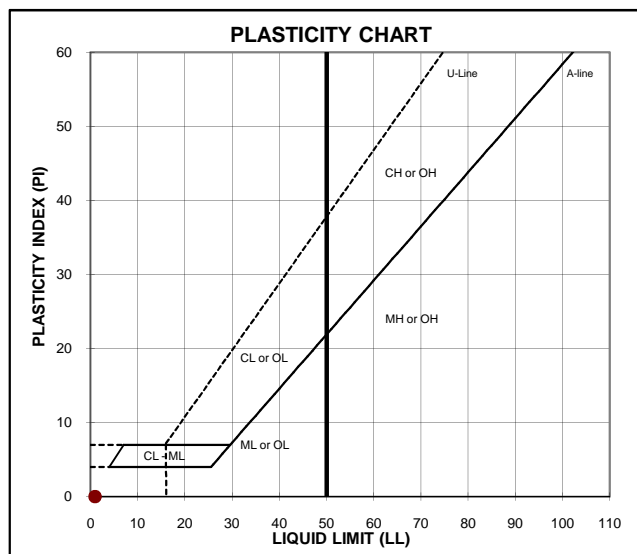
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	100.0	Coarse Sand
	#20	0.85	71.8	
	#40	0.43	37.1	Medium Sand
	#60	0.25	24.7	
	#100	0.15	16.3	Fine Sand
	#200	0.075	6.0	
Fines				6.02



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
17.3				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SP/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

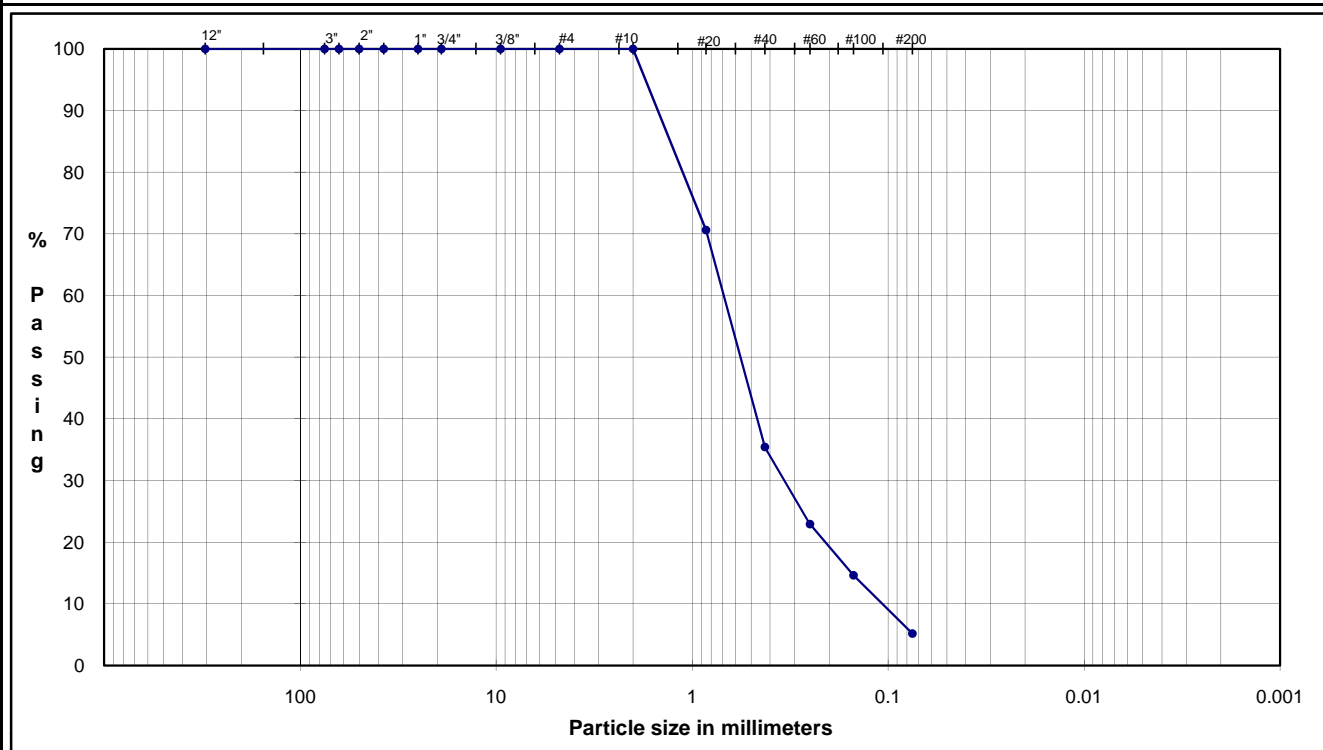
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: C3-WS4 0

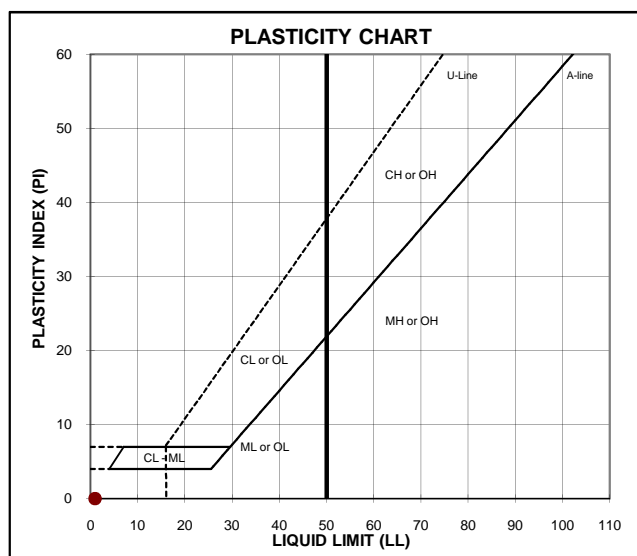
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	Coarse Sand
	#20	0.85	70.6	
	#40	0.43	35.4	Medium Sand
	#60	0.25	22.9	
	#100	0.15	14.6	
	#200	0.075	5.2	Fine Sand
				Fines
				5.17



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
19.1				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SP/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

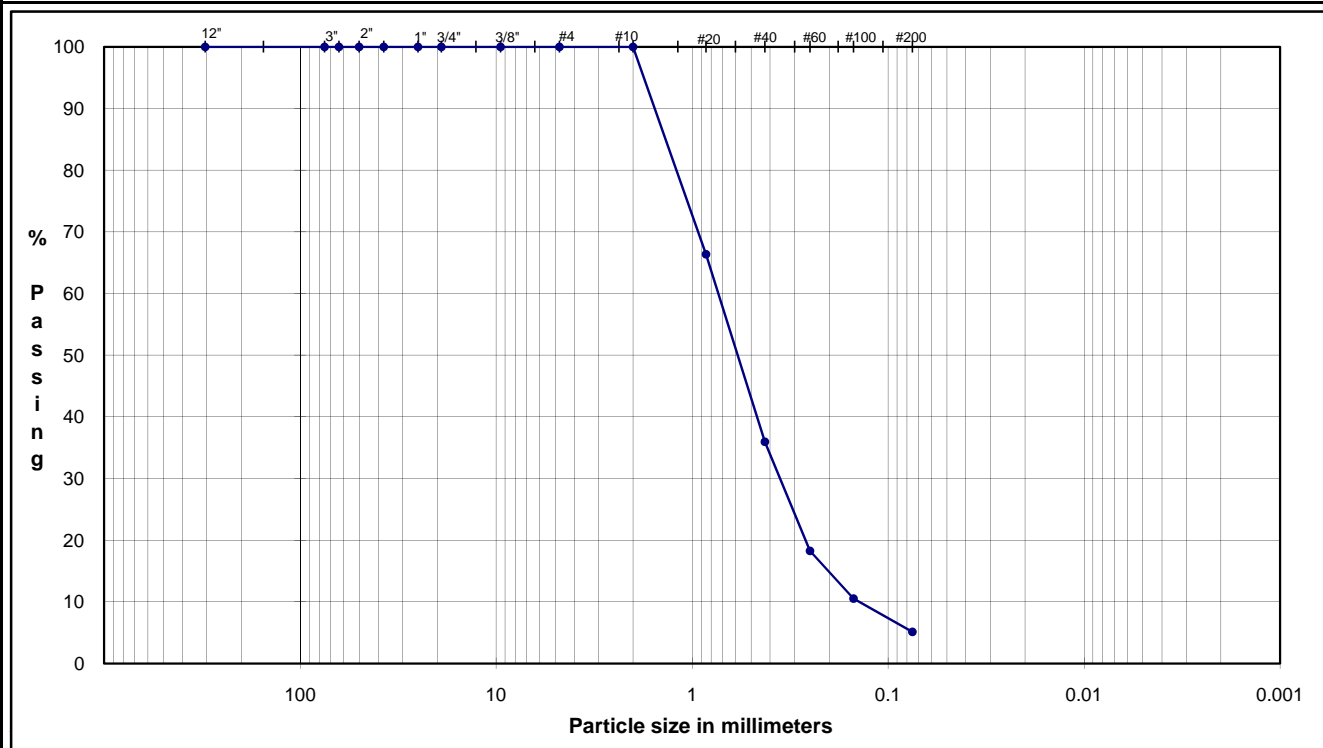
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-B 0

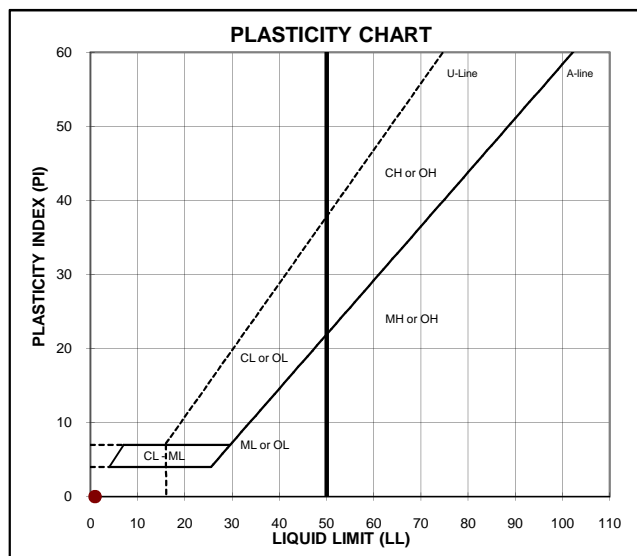
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size			Particle Size	
	(mm)	% Passing	Classification	Percentage	
	12.0"	304.8	100.0	Cobbles	0.00
	3.0"	75.0	100.0		
	2.5"	63.5	100.0		
	2.0"	50.0	100.0		
	1.5"	37.5	100.0		
	1.0"	25.0	100.0	Coarse Gravel	0.00
	0.75"	19.0	100.0		
	0.50"	12.7	100.0		
	0.375"	9.5	100.0	Fine Gravel	0.00
	#4	4.8	100.0		
	#10	2.00	100.0	Coarse Sand	0.00
	#20	0.85	66.4	Medium Sand	64.06
	#40	0.43	35.9		
	#60	0.25	18.3		
	#100	0.15	10.5	Fine Sand	30.82
	#200	0.075	5.1		
Fines				5.12	



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
9.7				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: C-F SAND

some silt

USCS:

SP/SM

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

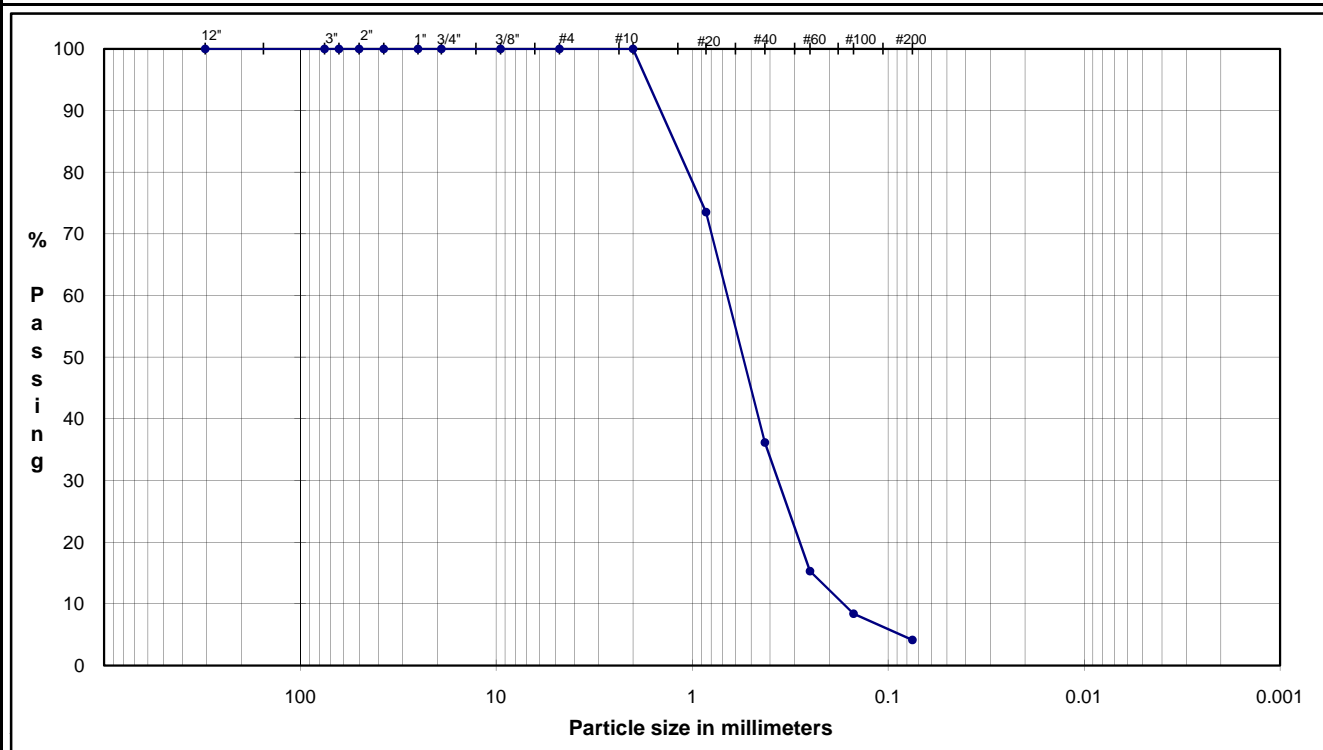
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-C 0

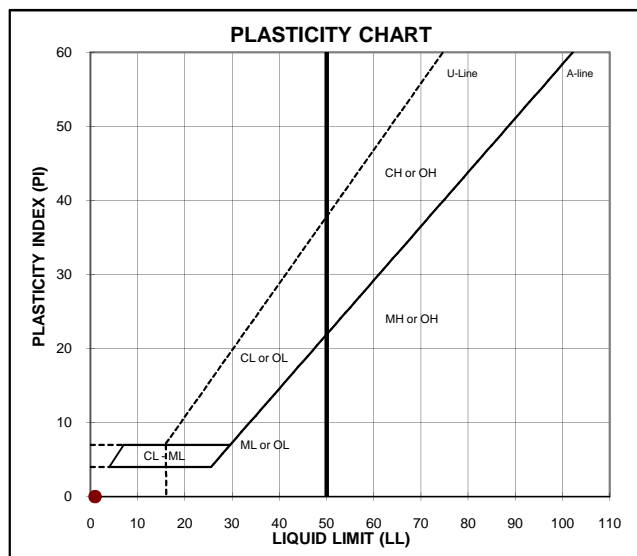
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)	% Passing	Classification	Percentage
	Particle Size (mm)	% Passing	Classification	Percentage
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	Coarse Sand
	#20	0.85	73.5	
	#40	0.43	36.2	Medium Sand
	#60	0.25	15.3	
	#100	0.15	8.4	
	#200	0.075	4.1	Fine Sand
			Fines	4.14



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
12.1				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: C-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

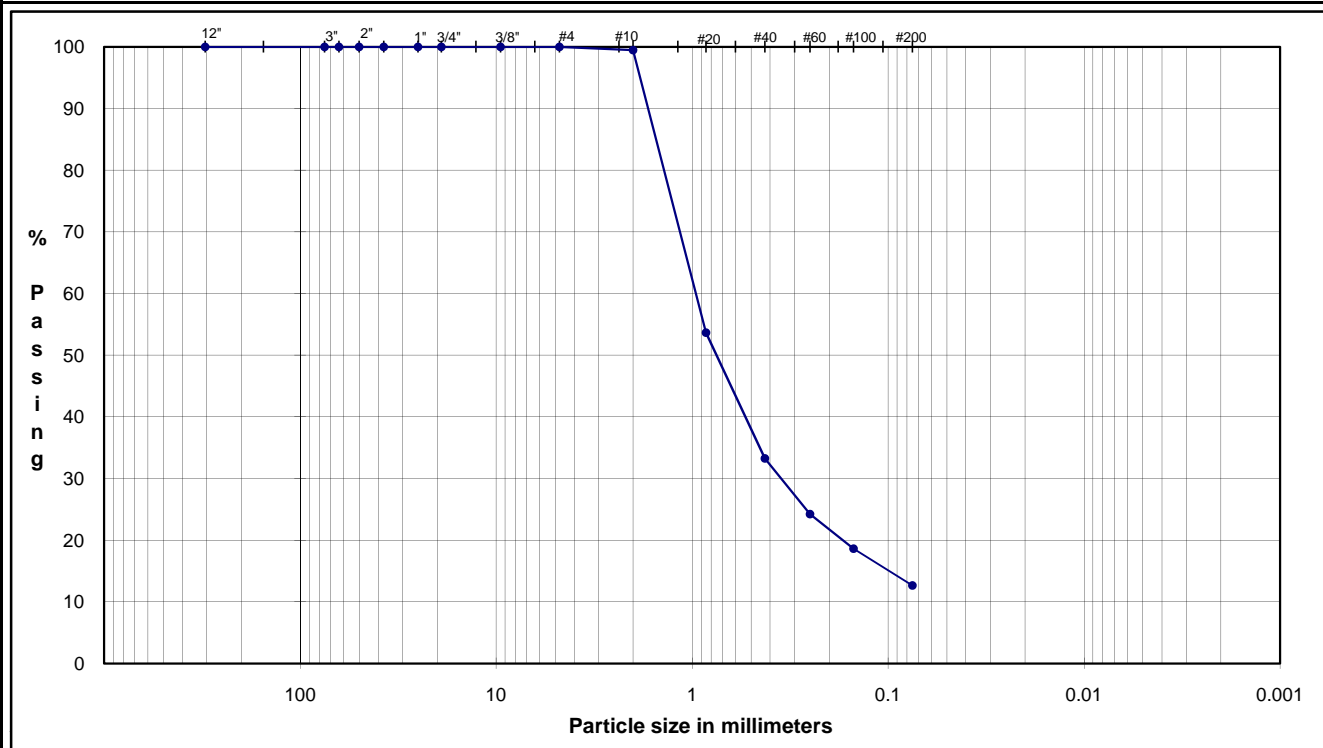
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-D 0

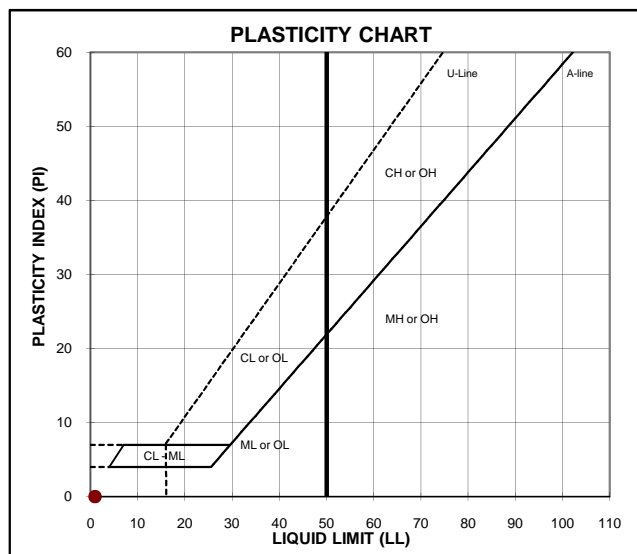
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	Coarse Gravel
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	99.5	
	#20	0.85	53.7	Medium Sand
	#40	0.43	33.3	
	#60	0.25	24.2	
	#100	0.15	18.6	Fine Sand
	#200	0.075	12.7	
	Fines			12.66



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
9.0				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: C-F SAND

some silt

USCS:

SM

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

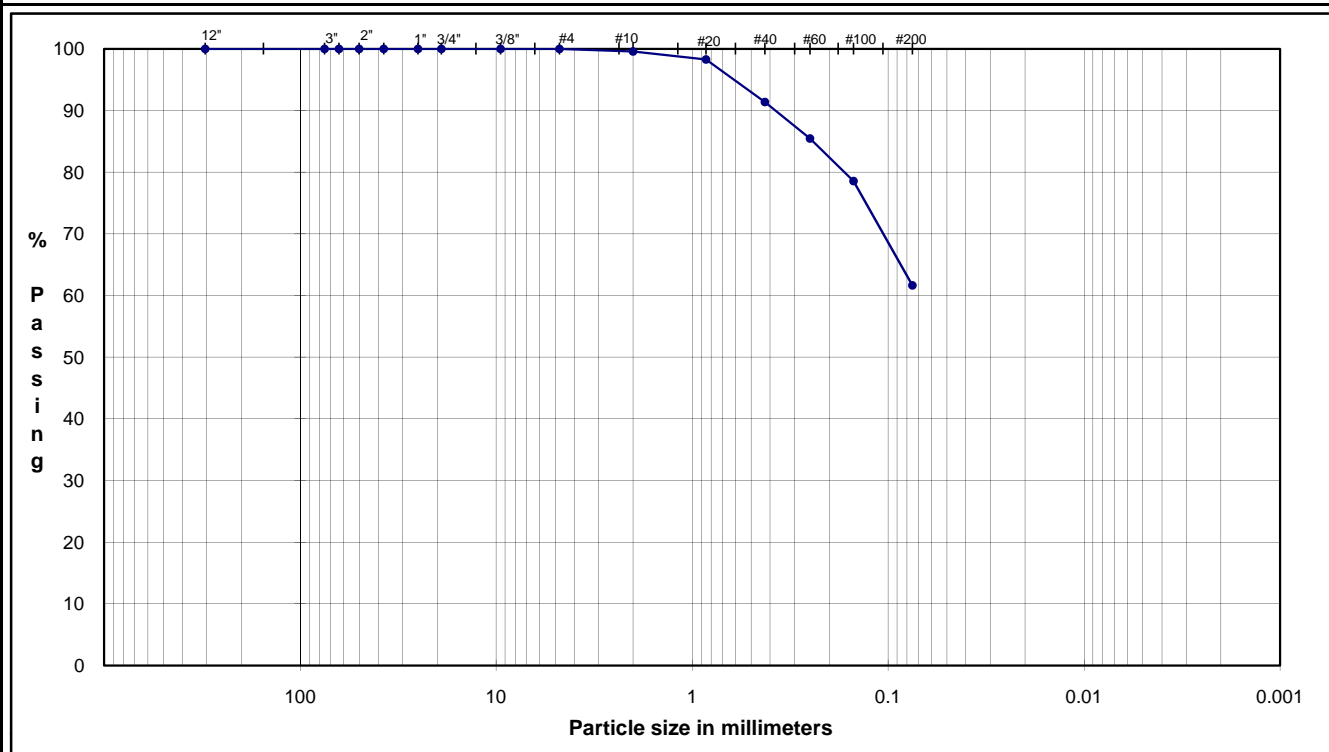
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-E 0

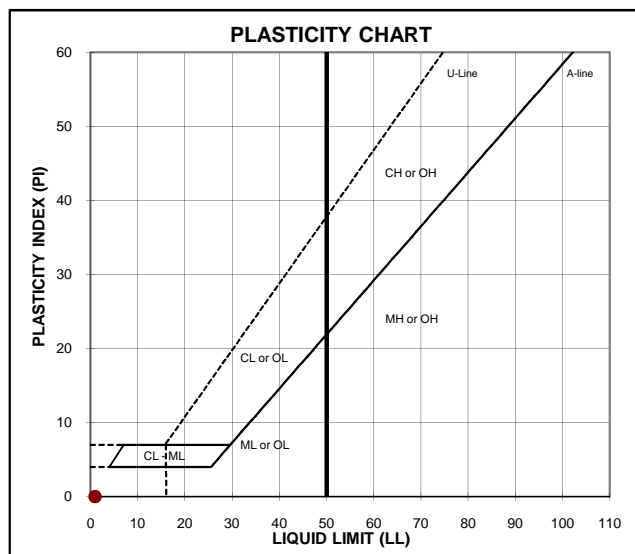
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	Fine Gravel
	#4	4.8	100.0	
	#10	2.00	99.6	
	#20	0.85	98.3	Coarse Sand
	#40	0.43	91.4	
	#60	0.25	85.4	Medium Sand
	#100	0.15	78.6	
	#200	0.075	61.6	
	Fines			61.64



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
91.3				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: SILT and C-F SAND

0

USCS: 0

TECH TCM

DATE 11/4/09

CHECK TCM

REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

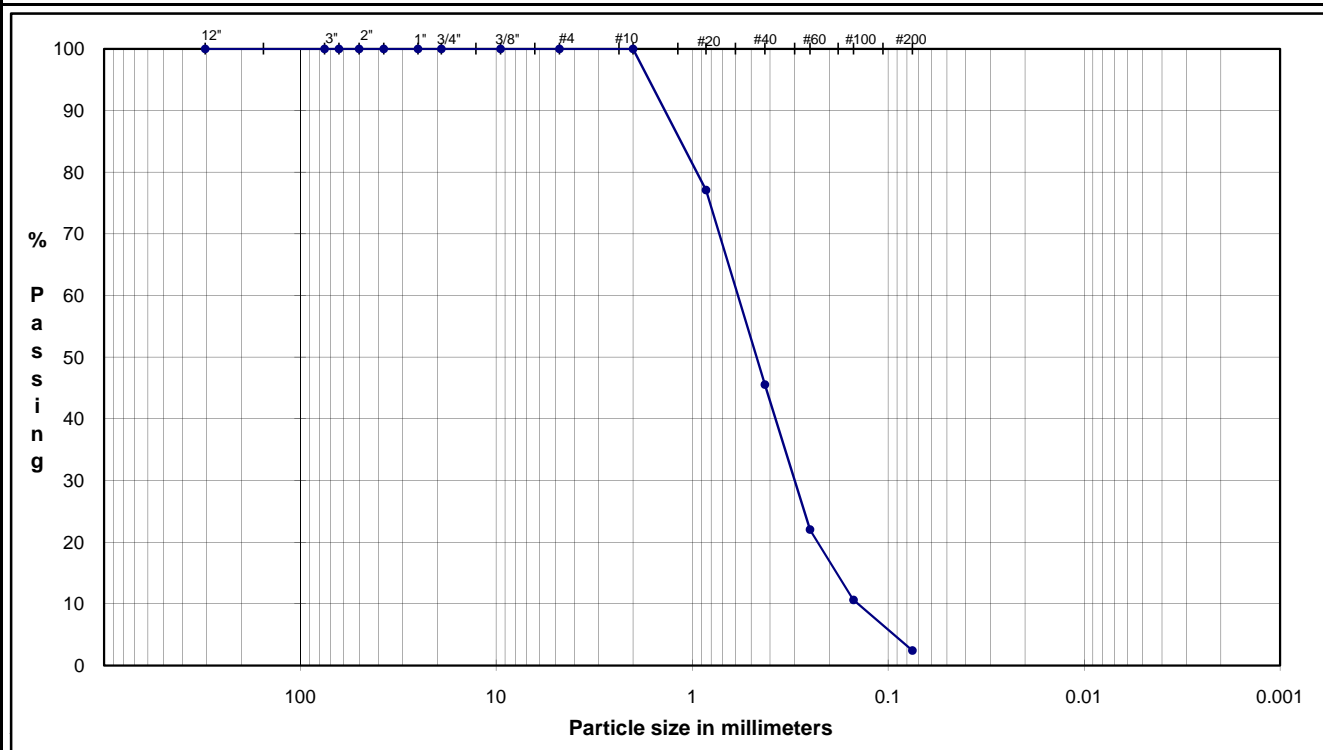
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-F 0

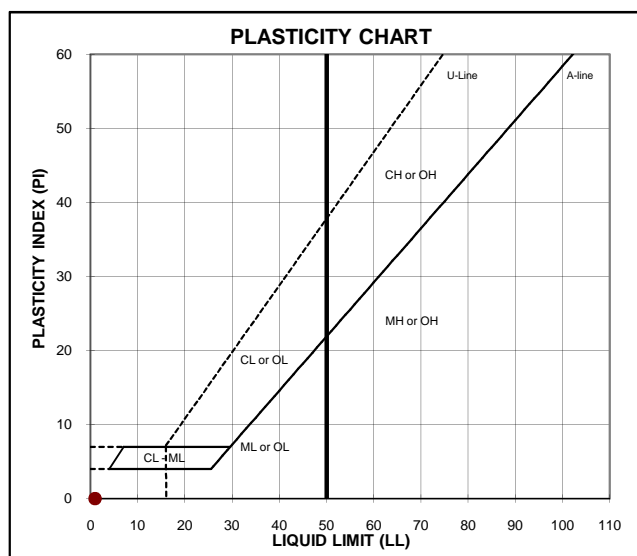
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	% Passing		Percentage	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	Coarse Sand
	#20	0.85	77.1	
	#40	0.43	45.6	Medium Sand
	#60	0.25	22.0	
	#100	0.15	10.6	
	#200	0.075	2.4	Fine Sand
				Fines
				2.44



ATTERBERG LIMITS

Method -B (Dry preparation)

M _c	LL	PL	PI	LI
23.9				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

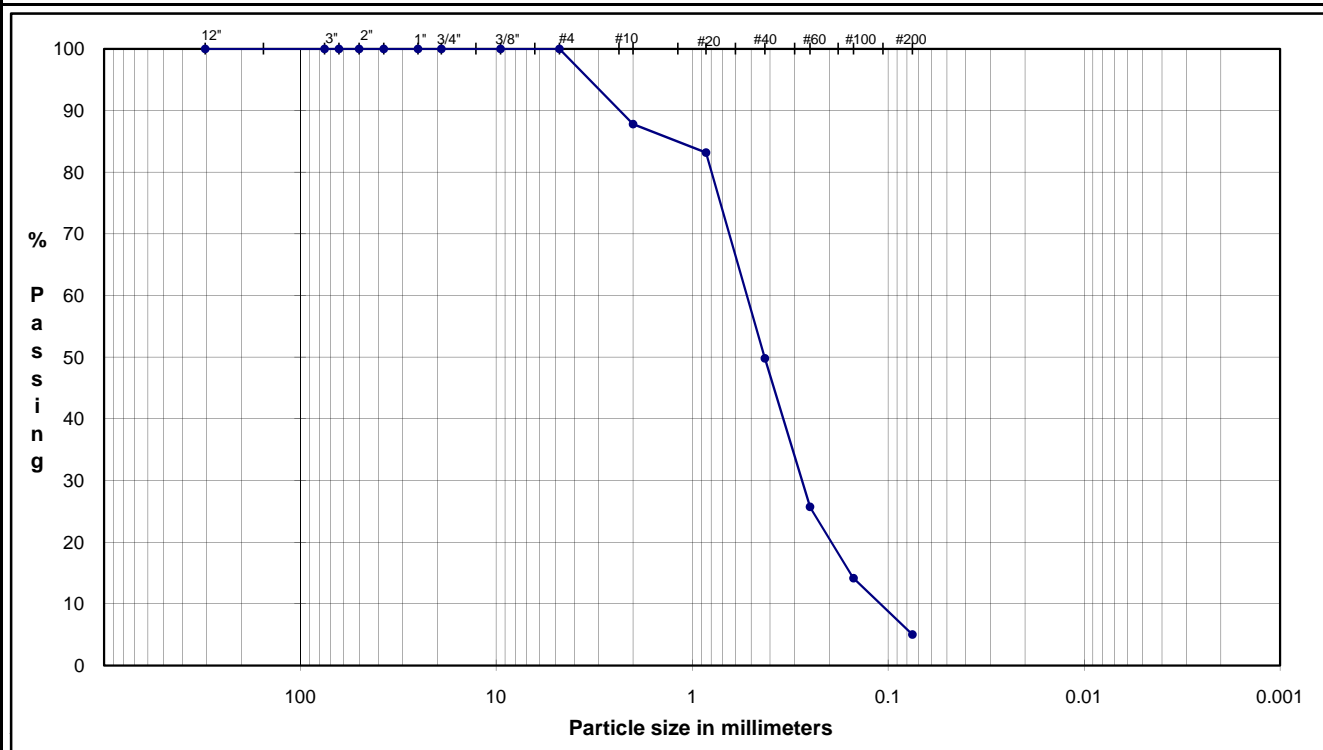
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-WS1 0

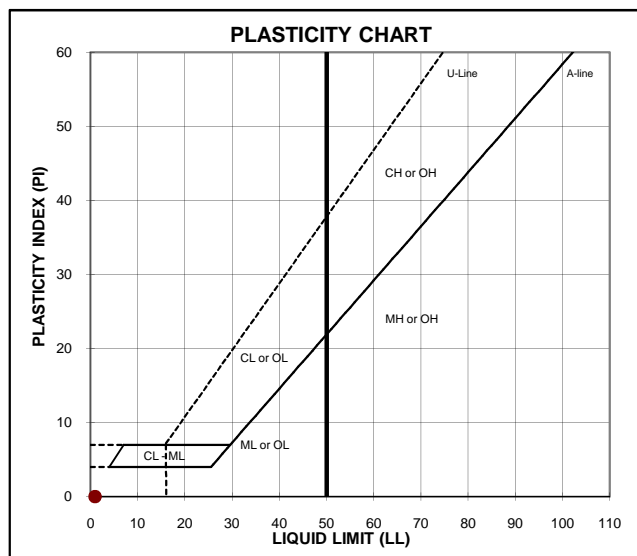
Depth: 0

TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size			Particle Size	
	(mm)	% Passing	Classification	Percentage	
	12.0"	304.8	100.0	Cobbles	0.00
	3.0"	75.0	100.0		
	2.5"	63.5	100.0		
	2.0"	50.0	100.0	Coarse Gravel	0.00
	1.5"	37.5	100.0		
	1.0"	25.0	100.0		
	0.75"	19.0	100.0		
	0.50"	12.7	100.0		
	0.375"	9.5	100.0		
	#4	4.8	100.0	Fine Gravel	0.00
	#10	2.00	87.8	Coarse Sand	12.18
	#20	0.85	83.2	Medium Sand	38.00
	#40	0.43	49.8		
	#60	0.25	25.7		
	#100	0.15	14.1	Fine Sand	44.82
#200	0.075	5.0			
			Fines	4.99	



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
21.8				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

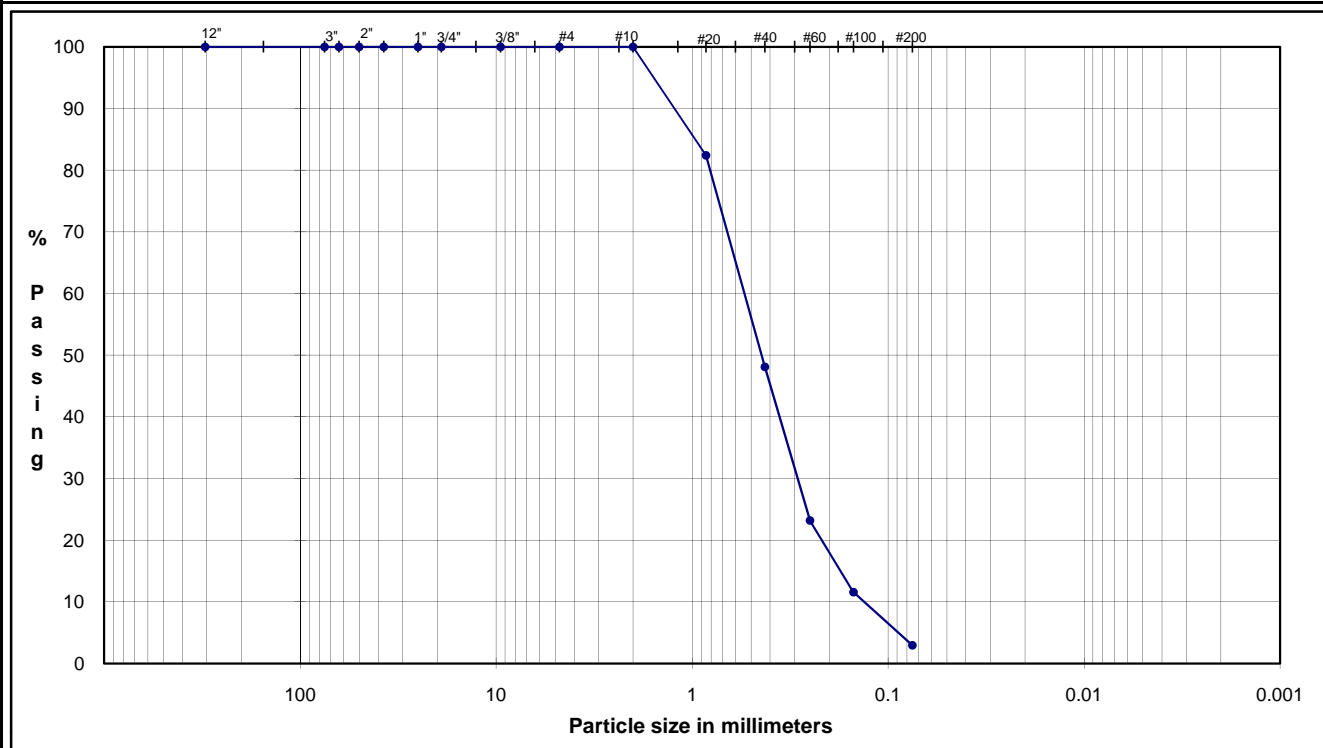
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-WS2 0

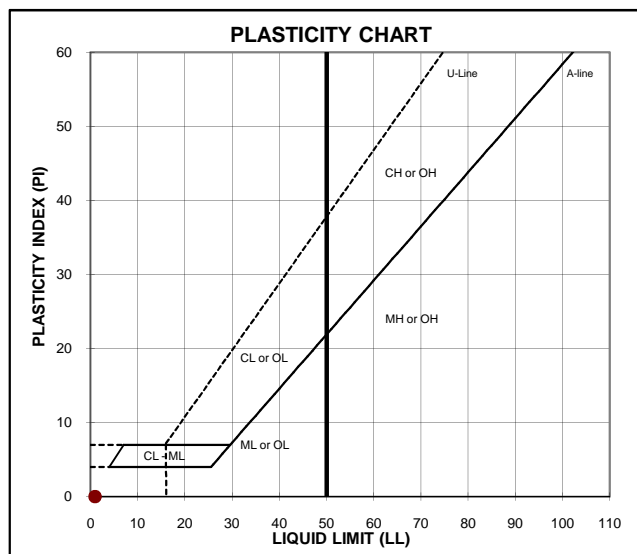
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	% Passing		Percentage	
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	Cobbles
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	Fine Gravel
	#10	2.00	100.0	Coarse Sand
	#20	0.85	82.4	
	#40	0.43	48.1	Medium Sand
	#60	0.25	23.2	
	#100	0.15	11.5	
	#200	0.075	2.9	Fine Sand
				Fines
				2.91



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
21.5				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

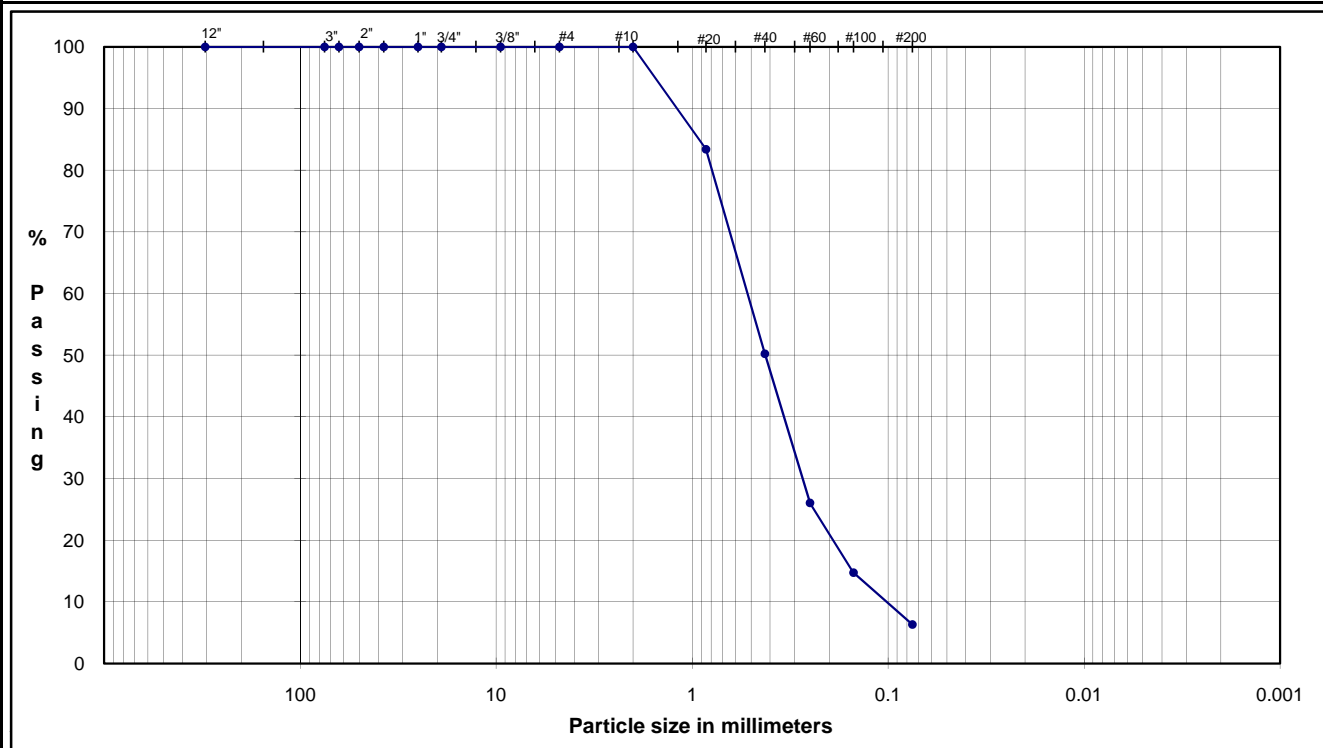
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-WS3 0

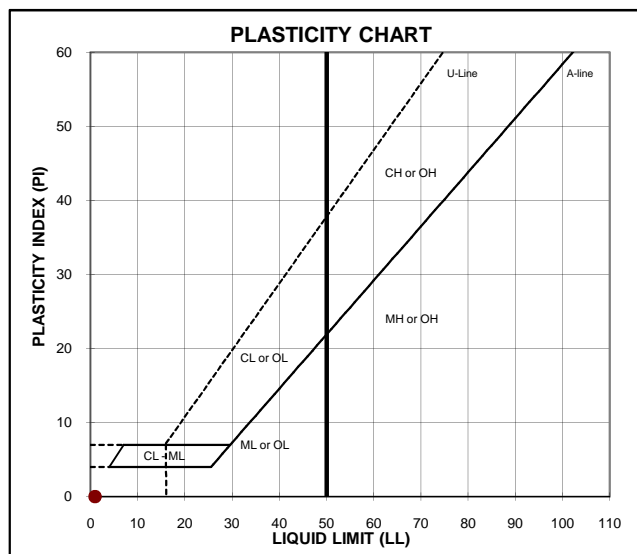
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)		Particle Size Classification	
	(mm)	% Passing	Classification	Percentage
	12.0"	304.8	100.0	
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	100.0	
	#10	2.00	100.0	
	#20	0.85	83.4	
	#40	0.43	50.3	
	#60	0.25	26.0	
	#100	0.15	14.7	
	#200	0.075	6.3	
			Fines	6.31



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
23.1				

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

DESCRIPTION: M-F SAND
little silt

USCS: SP/SM

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

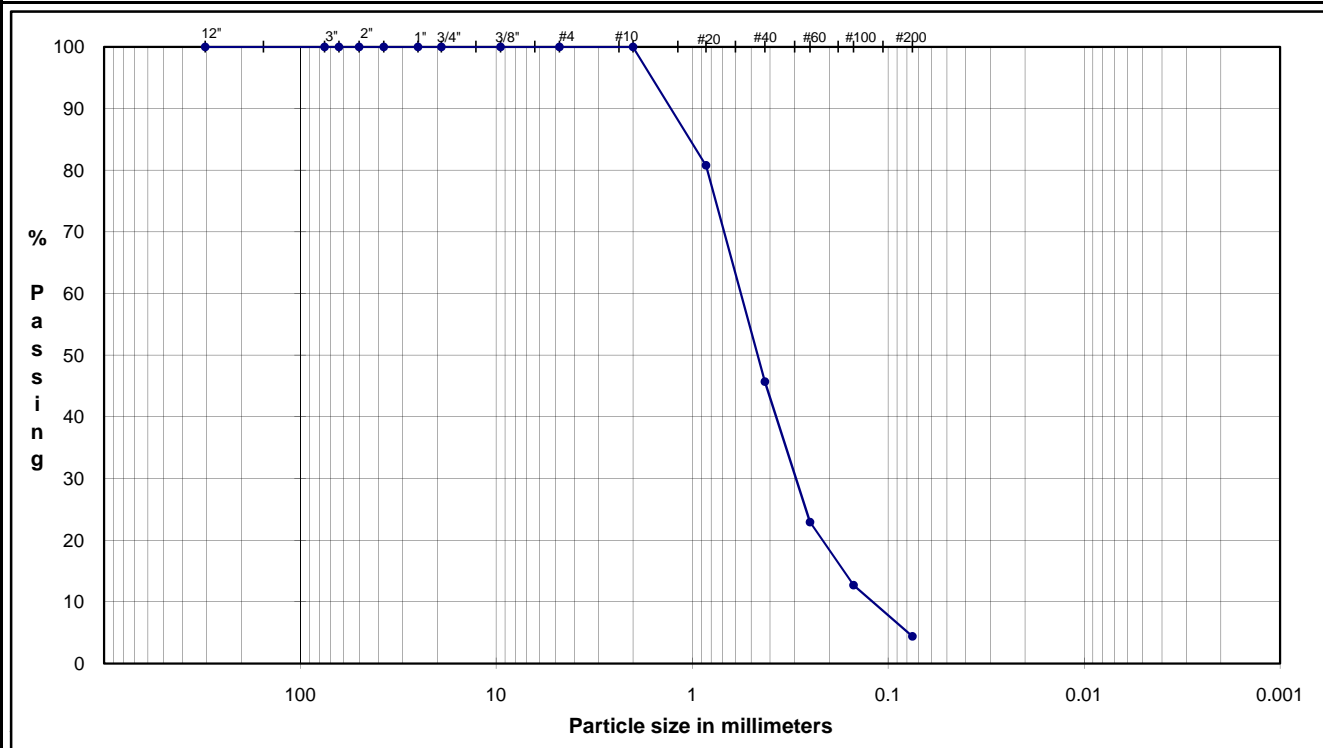
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-WS4 0

Depth: 0

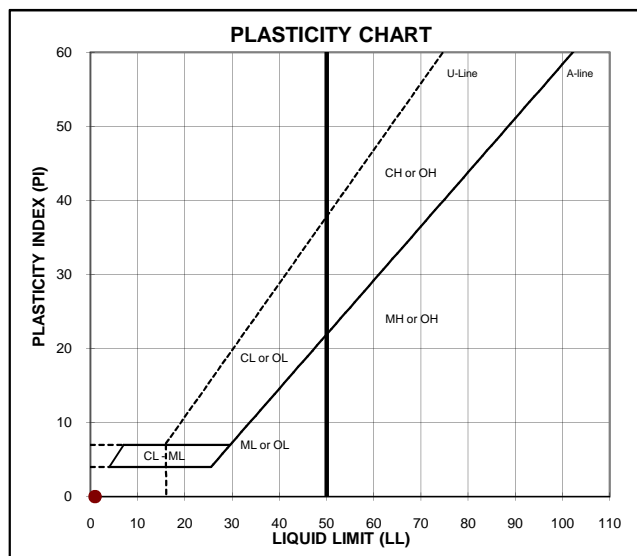
TYPE: 0



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

Particle Size			Particle Size	
(mm)	% Passing	Classification	Percentage	
12.0"	304.8	100.0	Cobbles	0.00
3.0"	75.0	100.0		
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0	Coarse Gravel	0.00
0.75"	19.0	100.0		
0.50"	12.7	100.0		
0.375"	9.5	100.0	Fine Gravel	0.00
#4	4.8	100.0		
#10	2.00	100.0		
#20	0.85	80.8	Coarse Sand	0.00
#40	0.43	45.7	Medium Sand	54.27
#60	0.25	22.9		
#100	0.15	12.7		
#200	0.075	4.4	Fine Sand	41.35
Fines				4.38



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
19.7				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

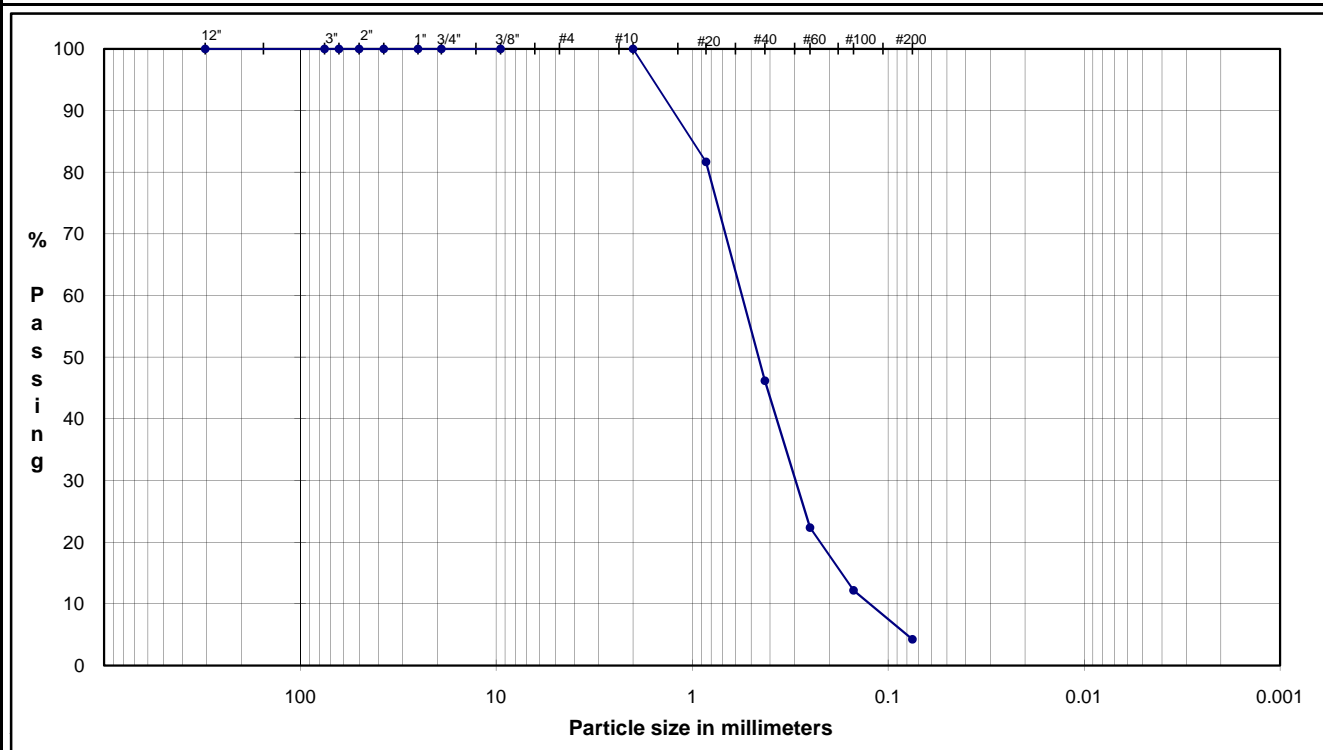
ASTM D421, D422, D4318

PROJECT NAME: Potlatch / Avery Landing EE/CA 1 MP / WA

SAMPLE ID: TS2U-WS5 0

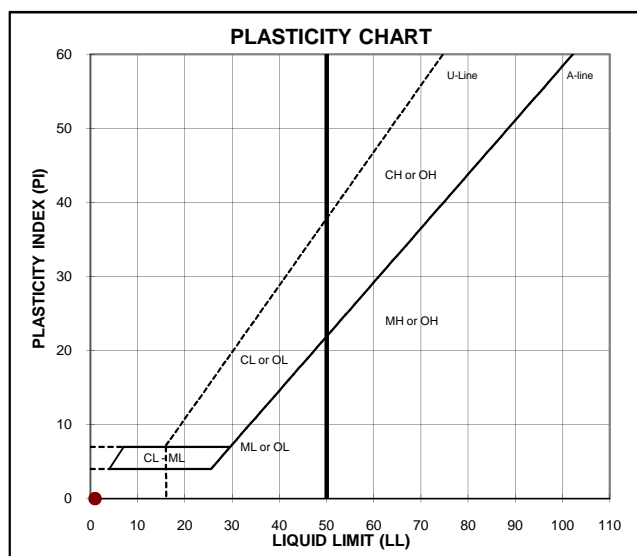
Depth: 0

TYPE: 0



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

	Particle Size		Classification	Percentage
	(mm)	% Passing		
U.S. Standard Sieves Sizes and Numbers	12.0"	304.8	100.0	Cobbles
	3.0"	75.0	100.0	
	2.5"	63.5	100.0	
	2.0"	50.0	100.0	
	1.5"	37.5	100.0	
	1.0"	25.0	100.0	
	0.75"	19.0	100.0	Coarse Gravel
	0.50"	12.7	100.0	
	0.375"	9.5	100.0	
	#4	4.8	107.6	Fine Gravel
	#10	2.00	100.0	Coarse Sand
	#20	0.85	81.7	Medium Sand
	#40	0.43	46.2	
	#60	0.25	22.3	
	#100	0.15	12.2	Fine Sand
	#200	0.075	4.2	
Fines				4.24



ATTERBERG LIMITS Method -B (Dry preparation)

M _c	LL	PL	PI	LI
19.9				

LL (oven-dried)
< 0.75 = ORGANIC
(OL/OH)

DESCRIPTION: M-F SAND
trace silt

USCS: SP

TECH TCM
DATE 11/4/09
CHECK TCM
REVIEW

Attachment C

Analytical Data Reports

G

Data and Assumptions for Cost Estimates

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Removal Action Cost Analysis, Alternative A2
LNAPL Extraction and Ex Situ Thermal Desorption of Soils
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Direct Capital Costs					Reference
Item Description	Quantity	Unit	Cost/Unit	Cost	
Field Overhead and Oversight	6.5	month	\$19,000	\$123,500	Assembly
Mobilization and Demobilization (non-thermal equipment)	1	l.s.	\$3,500	\$3,500	Assembly
Dewatering Pad	1	l.s.	\$15,000	\$15,000	Estimate
3000 PSI Pressure Washer for deconning	1	ea	\$6,875	\$6,875	33 17 0816
Excavation of Overburden	90,769	c.y.	\$2.52	\$228,738	31 23 16 1030
Excavation of Contaminated Soil	46,950	c.y.	\$3.52	\$165,265	31 23 16 1030
Material Hauling (from excavation to treatment unit/storage area)	137,719	c.y.	\$2.64	\$363,579	31 23 23.20 0014
Low Temperature Thermal Desorption Treatment	46,950	c.y.	\$89.05	\$4,180,915	Vendor Quote
Retreat 10% using LTID	4,695	c.y.	\$89.05	\$418,092	Vendor Quote
Disposal of Process Residue/Untreatable Soil	4,695	c.y.	\$27.40	\$128,644	Vendor Quote
Transportation of Process Residue/Untreatable Soil	4,695	c.y.	\$34.25	\$160,804	Vendor Quote
Material Hauling (from treatment unit/storage area to excavation)	137,719	c.y.	\$2.64	\$363,579	31 23 23.20 0014
Backfill gravel trench	13,502	c.y.	\$0.67	\$9,046	31 23 23 4000
Soil Placement and Compaction	137,719	c.y.	\$0.43	\$59,219	31 23 23.23 5000
Seeding	4.18	acre	\$2,022	\$8,461	Vendor Quote
Fertilizer	4.18	acre	\$595	\$2,490	Vendor Quote
Confirmation Sampling (treatment unit)	100	ea	\$200	\$20,000	Estimate
Confirmation Sampling (excavation)	250	ea	\$200	\$50,000	Estimate
LNAPL Extraction and Treatment Equipment Rental	5	month	\$23,502	\$117,510	Vendor Quote
LNAPL Extraction/Treatment Equipment Mobe/Demobe	1	l.s.	\$13,050	\$13,050	Vendor Quote
LNAPL Extraction/Treatment Equipment Expendables	2	charge	\$18,580	\$37,160	Vendor Quote
LNAPL Labor (2 skilled laborers)	6.5	month	\$23,056	\$149,864	RS Means
Transportation of LNAPL to incinerator	1	Load	\$3,375.00	\$3,375	Vendor Quote
LNAPL Disposal (Incineration)	2,500	gallons	\$0.50	\$1,250	Vendor Quote
Roadway - Subgrade preparation	30,000	s.f.	\$0.50	\$15,000	Estimate
Roadway - gravel base course	1,111	c.y.	\$54	\$59,994	32 11 23.23 1523 plus 30% for delivery
Roadway - bituminous stabilized top course	3,333	s.y.	\$24	\$79,999	32 11 26.19 1100 plus 30% for delivery
Roadway - 2-inch asphalt pavement layer	3,333	s.y.	\$12	\$39,996	32 12 16.13 0380 plus 30% for delivery
Silt Curtain	300	l.f.	\$15	\$4,500	Estimate
Excavate and Load Riprap	6,000	c.y.	\$10	\$60,000	31 23 23.15 6000
Haul riprap to/from stockpile	4,806	c.y.	\$2.64	\$12,688	31 23 23.20 0014
Crushed Stone for Bank Reconstruction	1,800	c.y.	\$30	\$54,000	Estimate
Geotextile	32,400	s.f.	\$0.40	\$12,960	Estimate
Riprap from off-site	1,194	c.y.	\$65	\$77,610	31 37 13.10 0100
Place Riprap	6,000	c.y.	\$25	\$150,000	31 37 13.10 0370
Subtotal Direct Capital Costs (rounded to nearest \$10,000)				\$7,200,000	
Indirect Capital Costs					
Engineering and Design (7%)			\$504,000		
Administration (5%)			\$360,000		
Legal Fees and License/Permit Costs (5%)			\$360,000		
3rd Party Construction Oversight (5%)			\$360,000		
Subtotal Indirect Capital Costs				\$1,584,000	
Subtotal Capital Costs				\$8,784,000	
Contingency Allowance (20%)				\$1,757,000	
Total Alternative Cost (rounded to nearest \$10,000)				\$10,540,000	

Key:

LNAPL = Liquid non-aqueous phased liquid.
l.s. = Lump sum.
c.y. = Cubic yard.
PSI = Pounds per square inch.
l.f. = linear foot.
s.f. = square foot.

Note: XX XX XX.XX XXX references are from
RS Means Heavy Construction Cost Data 2010.

General Assumptions:

Surface Area of LNAPL Plume Area: 174,424 square feet
Surface Area of Discrete Excavation Areas: 7,853 square feet
Total Surface Area of LNAPL Contaminated Areas: 182,277 square feet
Density of Soil: 1.37 tons/cubic yard

Notes:

Area determined from AutoCad

Volume of Overburden from Discrete Excavation Locations: 12,799 cubic yards
Volume of Overburden from LNAPL Plume Area: 60,970 cubic yards
Volume of Non-LNAPL Contaminated Soil from Side Slope Excavation: 17,000 cubic yards
Total Volume of Overburden: 90,769 cubic yards
Weight of Overburden: 124,354 tons

Volume of LNAPL Contaminated Soil from LNAPL Plume Area: 40,646 cubic yards
Volume of LNAPL Contaminated Soil from Discrete Excavation Locations: 2,036 cubic yards
Total Volume of LNAPL Contaminated Soil to be Excavated: 42,682 cubic yards
Plus 10% Factor: 46,950 cubic yards
Weight of Contaminated Soil: 64,322 tons

Volume determined from AutoCad using TPH thickness data.

Production/Treatment Rate

Lttd Unit treats 20 tons/hour Vendor Quote
for 6 days per week 14.6 c.y./hour
24 hours per day or 350 c.y./day
or
2,102 c.y./week

Total time required to treat:

20.30 weeks
or
5 months

Field Overhead and Expenses (per month basis)

Item	Cost/Month	reference
Superintendent	\$14,016	01 31 13.20 0260
Clerk	\$2,500	01 31 13.20 0020
Trailers (2)	\$574	01 52 13.20 0350
Electric	\$800	Estimate
Telephone (2 hard lines)	\$400	Estimate
Porta John (3)	\$814	01 54 33 40 6410
Field Office Expenses	\$184	01 52 13.40 0100
Total:	\$19,000	per month

Mobe/Demobe

Item	Qty	Cost/Unit	Cost	ref
Backhoe (mobe)	2	\$251	\$502	01 54 36.5 0020
Dozer (mobe)	2	\$251	\$502	01 54 36.5 0020
75 mile transport (mobe)	4	\$188	\$753	01 54 36.5 2500
Backhoe (demobe)	2	\$251	\$502	01 54 36.5 0020
Dozer (demobe)	2	\$251	\$502	01 54 36.5 0020
75 mile transport (demobe)	4	\$188	\$753	01 54 36.5 2500
				\$3,500

Removal Action Cost Analysis, Alternative A3
LNAPL Extraction and Ex Situ Soil Washing
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Direct Capital Costs	Quantity	Unit	Cost/Unit	Cost	Reference
Field Overhead and Oversight	3.5	month	\$19,000	\$66,500	Assembly
Mobilization and Demobilization (non-treatment equipment)	1	l.s.	\$3,500	\$3,500	Assembly
Dewatering Pad	1	l.s.	\$15,000	\$15,000	Estimate
3000 PSI Pressure Washer for deconning	1	ea	\$6,875	\$6,875	31 17 0816
Excavation of Overburden	90,769	c.y.	\$2.52	\$228,738	31 23 16 1030
Excavation of Contaminated Soil	46,950	c.y.	\$3.52	\$165,265	31 23 16 1030
Material Hauling (from excavation to treatment unit/storage area)	137,719	c.y.	\$2.64	\$363,579	31 23 23 20 0014
Mobe/Demobe Soil Washing Equipment	1	l.s.	\$520,000	\$520,000	Vendor Quote
Soil Washing Processing Costs	46,950	c.y.	\$41.10	\$1,929,653	Vendor Quote
Retreat 10% using Soil Washing	4,695	c.y.	\$41.10	\$192,965	Vendor Quote
Disposal of Process Residue/Untreatable Soil	4,695	c.y.	\$27.40	\$128,644	Vendor Quote
Transportation of Process Residue/Untreatable Soil	4,695	c.y.	\$34.25	\$160,804	Vendor Quote
Material Hauling (from treatment unit/storage area to excavation)	137,719	c.y.	\$2.64	\$363,579	31 23 23 20 0014
Purchase & transport of additional fill	4,695	c.y.	\$7.00	\$32,865	Vendor Quote
Backfill gravel trench	13,502	c.y.	\$0.67	\$9,046	31 23 23 4000
Soil Placement and Compaction	137,719	c.y.	\$0.43	\$59,219	31 23 23 23 5000
Seeding	4.18	acre	\$2.022	\$8,461	Vendor Quote
Fertilizer	4.18	acre	\$595	\$2,490	Vendor Quote
Confirmation Sampling (treatment unit)	100	ea	\$200	\$20,000	Estimate
Confirmation Sampling (excavation)	250	ea	\$200	\$50,000	Estimate
LNAPL Extraction and Treatment Equipment Rental	2	month	\$23,502	\$52,450	Vendor Quote
LNAPL Extraction/Treatment Equipment Mobe/Demobe	1	l.s.	\$13,050	\$13,050	Vendor Quote
LNAPL Extraction/Treatment Equipment Expendables	2	charge	\$18,580	\$37,160	Vendor Quote
LNAPL Labor (2 skilled laborers)	3.5	month	\$23,056	\$80,696	RS Means
Transportation of LNAPL to incinerator	1	Load	\$3,375.00	\$3,375	Vendor Quote
LNAPL Disposal	2,500	gallons	\$0.50	\$1,250	Vendor Quote
Roadway - Subgrade preparation	30,000	s.f.	\$0.50	\$15,000	Estimate
Roadway - gravel base course	1,111	c.y.	\$54	\$59,994	32 11 23.23 1523 plus 30% for delivery
Roadway - bituminous stabilized top course	3,333	s.y.	\$24	\$79,999	32 11 26.19 1100 plus 30% for delivery
Roadway - 2-inch asphalt pavement layer	3,333	s.y.	\$12	\$39,996	32 12 16.13 0380 plus 30% for delivery
Silt Curtain	300	l.f.	\$15	\$4,500	Estimate
Excavate and Load Riprap	6,000	c.y.	\$10	\$60,000	31 23 23.15 6000
Haul riprap to/from stockpile	4,806	c.y.	\$2.64	\$12,688	31 23 23.20 0014
Crushed Stone for Bank Reconstruction	1,800	c.y.	\$30	\$54,000	Estimate
Geotextile	32,400	s.f.	\$0.40	\$12,960	Estimate
Riprap from off-site	6,000	c.y.	\$65	\$390,000	31 37 13.10 0100
Place Riprap	6,000	c.y.	\$25	\$150,000	31 37 13.10 0370
Subtotal Direct Capital Costs (rounded to nearest \$10,000)				\$5,390,000	
Indirect Capital Costs					
Engineering and Design (7%)				\$377,000	
Administration (5%)				\$270,000	
Legal Fees and License/Permit Costs (5%)				\$270,000	
3rd Party Construction Oversight (5%)				\$270,000	
Subtotal Indirect Capital Costs				\$1,187,000	
Subtotal Capital Costs				\$6,577,000	
Contingency Allowance (20%)				\$1,315,000	
Total Alternative Cost (rounded to nearest \$10,000)				\$7,890,000	

Key:
LNAPL = Liquid non-aqueous phased liquid.
l.s. = Lump sum.
c.y. = Cubic yard.
PSI = Pounds per square inch.
l.f. = linear foot.
s.f. = square foot.

Note: XX XX XX.XX XXX references are from
RS Means Heavy Construction Cost Data 2010.

General Assumptions:		Notes:
Surface Area of LNAPL Plume Area:	174,424 square feet	Area determined from AutoCad
Surface Area of Discrete Excavation Areas:	7,853 square feet	
Total Surface Area of LNAPL Contaminated Areas:	182,277 square feet	
Density of Soil:	1.37 tons/cubic yard	
Volume of Overburden from Discrete Excavation Locations:	12,799 cubic yards	
Volume of Overburden from LNAPL Plume Area and Discrete Locations:	60,970 cubic yards	Volume determined from AutoCad using TPH thickness data.
Volume of Non-LNAPL Contaminated Soil from Side Slope Excavation:	17,000 cubic yards	
Total Volume of Overburden:	90,769 cubic yards	
Weight of Overburden:	124,354 tons	
Volume of LNAPL Contaminated Soil from LNAPL Plume Area:	40,646 cubic yards	Volume determined from AutoCad using TPH thickness data.
Volume of LNAPL Contaminated Soil from Discrete Excavation Locations:	2,036 cubic yards	
Total Volume of LNAPL Contaminated Soil to be Excavated:	42,682 cubic yards	
Plus 10% Factor	46,950 cubic yards	
Weight of Contaminated Soil:	64,322 tons	
Production/Treatment Rate		
Soil Washing Production:	850 c.y./day	Vendor Quote
	or	
	4,250 c.y./week	
Total time required to treat:	10.04 weeks	
	or	
	2 months	
Soils to be shipped off-site for disposal (10%):	203.6 cubic yards	
Field Overhead and Expenses (per month basis)		
Item	Cost/Month	reference
Superintendent	\$14,016.00	01 31 13.20 0260
Clerk	\$2,500.00	01 31 13.20 0020
Trailers (2)	\$574.00	01 52 13.20 0350
Electric	\$800.00	Estimate
Telephone (2 hard lines)	\$400.00	Estimate
Porta John (3)	\$813.72	01 54 33 40 6410
Field Office Expenses	\$184.40	01 52 13.40 0100
Total:	\$19,000	per month
Mobe/Demobe		
Item	Qty	Cost/Unit Cost ref
Backhoe (mobe)	2	\$251 \$502 01 54 36.5 0020
Dozer (mobe)	2	\$251 \$502 01 54 36.5 0020
75 mile transport (mobe)	4	\$188 \$753 01 54 36.5 2500
Backhoe (demobe)	2	\$251 \$502 01 54 36.5 0020
Dozer (demobe)	2	\$251 \$502 01 54 36.5 0020
75 mile transport (demobe)	4	\$188 \$753 01 54 36.5 2500
		\$3,500

Removal Action Cost Analysis, Alternative A4
LNAPL Extraction and Off-Site Disposal
Draft Engineering Evaluation/Cost Analysis
Avery Landing Site, Avery, Idaho

Direct Capital Costs					Reference
Item Description	Quantity	Unit	Cost/Unit	Cost	
Field Overhead and Oversight	3.5	month	\$19,000	\$66,500	Assembly
Mobilization and Demobilization (non-treatment equipment)	1	l.s.	\$3,500	\$3,500	Assembly
Pre-design PCB Investigation	1	l.s.	\$25,000	\$25,000	Estimate
Dewatering Pad	1	l.s.	\$15,000	\$15,000	Estimate
3000 PSI Pressure Washer for deconning	1	ea	\$6,875	\$6,875	31 17 0816
Excavation of Overburden	90,769	c.y.	\$2.52	\$228,738	31 23 16 1030
Excavation of Contaminated Soil	46,950	c.y.	\$3.52	\$165,265	31 23 16 1030
Material Handling	137,719	c.y.	\$2.64	\$363,579	31 23 23.20 0014
Disposal of Contaminated Soil	42,950	ton	\$20	\$858,995	Vendor Quote
Transportation of Contaminated Soil	42,950	ton	\$24.50	\$1,052,289	Vendor Quote
Disposal of PCB Contaminated Soil	21,372	ton	\$21.50	\$459,498	Vendor Quote
Transportation of PCB Contaminated Soil	21,372	ton	\$36.30	\$775,804	Vendor Quote
Purchase & transport of additional fill	42,682	c.y.	\$7.00	\$298,774	Vendor Quote
Material Hauling (from treatment unit/storage area to excavation)	90,769	c.y.	\$2.64	\$239,630	31 23 23.20 0014
Backfill gravel trench	13,502	c.y.	\$0.67	\$9,046	31 23 23 4000
Soil Placement and Compaction	137,719	c.y.	\$0.43	\$59,219	31 23 23.23 5000
Seeding	4.18	acre	\$2,022	\$8,461	Vendor Quote
Fertilizer	4.18	acre	\$595	\$2,490	Vendor Quote
Confirmation Sampling (treatment unit)	100	ea	\$20	\$2,000	Estimate
Confirmation Sampling (excavation)	250	ea	\$200	\$50,000	Estimate
LNAPL Extraction and Treatment Equipment Rental	3.5	month	\$23,502	\$82,257	Vendor Quote
LNAPL Extraction/Treatment Equipment Mobe/Demobe	1	l.s.	\$13,050	\$13,050	Vendor Quote
LNAPL Extraction/Treatment Equipment Expendables	2	charge	\$18,580	\$37,160	Vendor Quote
LNAPL Labor (2 skilled laborers)	3.5	month	\$23,056	\$80,696	RS Means
Transportation of LNAPL to incinerator	1	Load	\$3,375.00	\$3,375	Vendor Quote
LNAPL Disposal	2,500	gallons	\$0.50	\$1,250	Vendor Quote
Roadway - Subgrade preparation	30,000	s.f.	\$0.50	\$15,000	Estimate
Roadway - gravel base course	1,111	c.y.	\$54	\$59,994	32 11 23.23 1523 plus 30% for delivery
Roadway - bituminous stabilized top course	3,333	s.y.	\$24	\$79,999	32 11 26.19 1100 plus 30% for delivery
Roadway - 2-inch asphalt pavement layer	3,333	s.y.	\$12	\$39,996	32 12 16.13 0380 plus 30% for delivery
Silt Curtain	300	l.f.	\$15	\$4,500	Estimate
Excavate and Load Riprap	6,000	c.y.	\$10	\$60,000	31 23 23.15 6000
Haul riprap to/from stockpile	4,806	c.y.	\$2.64	\$12,688	31 23 23.20 0014
Crushed Stone for Bank Reconstruction	1,800	c.y.	\$30	\$54,000	Estimate
Geotextile	32,400	s.f.	\$0.40	\$12,960	Estimate
Riprap from off-site	6,000	c.y.	\$65	\$390,000	31 37 13.10 0100
Place Riprap	6,000	c.y.	\$25	\$150,000	31 37 13.10 0370
Subtotal Direct Capital Costs (rounded to nearest \$10,000)				\$5,810,000	
Indirect Capital Costs					
Engineering and Design (7%)				\$407,000	
Administration (5%)				\$290,000	
Legal Fees and License/Permit Costs (5%)				\$290,000	
3rd Party Construction Oversight (5%)				\$290,000	
Subtotal Indirect Capital Costs				\$1,277,000	
Subtotal Capital Costs				\$7,087,000	
Contingency Allowance (20%)				\$1,417,000	
Total Alternative Cost (rounded to nearest \$10,000)				\$8,500,000	

Key:

LNAPL = Liquid non-aqueous phased liquid.
l.s. = Lump sum.
c.y. = Cubic yard.
PSI = Pounds per square inch.
l.f. = linear foot.
s.f. = square foot.

Note: XX XX XX.XX XXX references are from
RS Means Heavy Construction Cost Data 2010.

General Assumptions:		Notes:	
Surface Area of LNAPL Plume Area:	174,424 square feet	Area determined from AutoCad	
Surface Area of Discrete Excavation Areas:	7,853 square feet		
Total Surface Area of LNAPL Contaminated Areas:	182,277 square feet		
Density of Soil:	1.37 tons/cubic yard		
Volume of Overburden from Discrete Excavation Locations:	12,799 cubic yards		
Volume of Overburden from LNAPL Plume Area	60,970 cubic yards	Volume determined from AutoCad using TPH thickness data.	
LNAPL Contaminated Soil from Side Slope Excavation:	17,000 cubic yards		
Total Volume of Overburden:	90,769 cubic yards		
Weight of Overburden:	124,354 tons		
Volume of Contaminated Soil from LNAPL Plume Area:	40,646 cubic yards	Volume determined from AutoCad using TPH thickness data.	
Volume of Contaminated Soil from Discrete Excavation Locations:	2,036 cubic yards		
Total Volume of Contaminated Soil to be Excavated:	42,682 cubic yards		
Plus 10% Factor	46,950 cubic yards		
Net Volume (Non-PCB)	31,350 cubic yards		
Weight of (Non-PCB) Contaminated Soil:	42,950 tons		
Volume of PCB Contaminated Soil:	15,600 cubic yards		
Weight of PCB Contaminated Soil:	21,372 tons		
Field Overhead and Expenses (per month basis)			
<i>Item</i>		<i>Cost/Month</i>	<i>reference</i>
Superintendent		\$14,016.00	01 31 13.20 0260
Clerk		\$2,500.00	01 31 13.20 0020
Trailers (2)		\$574.00	01 52 13.20 0350
Electric		\$800.00	Estimate
Telephone (2 hard lines)		\$400.00	Estimate
Porta John (3)		\$813.72	01 54 33.40 6410
Field Office Expenses		\$184.40	01 52 13.40 0100
Total:		\$19,288.12	per month
Mobe/Demobe			
<i>Item</i>	<i>Qty</i>	<i>Cost/Unit</i>	<i>Cost ref</i>
Backhoe (mobe)	2	\$251	\$502 01 54 36.5 0020
Dozer (mobe)	2	\$251	\$502 01 54 36.5 0020
75 mile transport (mob)	4	\$188	\$753 01 54 36.5 2500
Backhoe (demobe)	2	\$251	\$502 01 54 36.5 0020
Dozer (demobe)	2	\$251	\$502 01 54 36.5 0020
75 mile transport (dem)	4	\$188	\$753 01 54 36.5 2500
			\$3,514